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Hearing voices: colonialism, outsider perspectives, island and Indigenous issues, and publishing ethics

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ABSTRACT: This editorial introduction delves into problematic aspects of positionality and publishing ethics related to island and Indigenous issues. Taking its point of departure in Gilley's paper on 'The case for colonialism' and Pöllath's paper 'Revisiting island decolonization', the present paper questions: Whose voices should we listen to when considering island and Indigenous issues? If some voices should be excluded from the debate, how should we determine which voices are excluded? Ultimately, the paper criticizes exclusionary approaches and argues that *Island Studies Journal* should be open to publishing articles from metropolitan and outsider perspectives as well as from islander and Indigenous perspectives—but that it is necessary for authors and readers to be aware of their own positions within the colonial matrix of power.

Keywords: colonialism, colonial matrix of power, Indigenous issues, islands, outsider perspectives, publishing ethics.

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Introduction

'The study of islands on their own terms'. This statement of purpose for island studies, launched by McCall (1994), helped guide the field for over a decade.

It now exists in a theoretical twilight, lives on in that curious scholarly afterlife accorded to perspectives that are mainly used to emphasize their own inadequacy. Today, those who are deeply involved in island studies primarily cite 'the study of islands on their own terms' as a springboard for introspective critique—a noble tradition begun in 2008 by my predecessor as executive editor of *Island Studies Journal*, Godfrey Baldacchino. (Though I find, to my chagrin, that 'The study of islands on their own terms' remains *Island Studies Journal*'s motto, prominently displayed on the journal's website. It is not just that 'zombie theories' (Ritzer & Yagatich, 2012, pp. 105-106) are difficult to kill but also that we sometimes find it useful to keep them alive.)

As our field grows in strength, size, and nuance, its list of 'essential reading' risks becoming unwieldy and unrealistic. Yet Baldacchino's (2008) paper 'Studying islands: on whose terms?' remains both critical and necessary. I will not restate Baldacchino's argument here. My own argument will follow somewhat different lines, inspired by particular challenges that we face today. Nevertheless, if you can only read one island studies paper, set the present one aside and read its precursor instead.

The immediate inspiration for the present editorial comment is another paper that has been published in *Island Studies Journal, 13*(1): Moritz Pöllath's (2018) 'Revisiting island decolonization: the pursuit of self-government in Pacific island polities under US hegemony'.

Pöllath's paper was submitted to *Island Studies Journal* in January 2017 and over the course of the next three months was assessed by three peer reviewers in a double-blinded process. All three reviewers are experts on government and decolonization in the Pacific, and one of the reviewers has a Pacific Indigenous background. Each of the three reviewers offered substantial but constructive criticism, and each encouraged the author to revise and resubmit his paper. Pöllath subsequently undertook to revise his paper on the basis of the peer reviewer reports as well as my own editorial comments, striving diligently to address all concerns.

And in the meantime, something happened that shook a portion of the world of scholarly publishing. In September 2017, the hitherto-respected journal *Third World Quarterly* published an article by the American political scientist Bruce Gilley titled 'The case for colonialism'. Gilley's piece came under immediate—and to my mind, justified—attack for being academically weak, and it prompted a public debate that led to mass resignations from the journal's editorial board, petitions in support of and opposed to the journal, and eventual retraction of the article by the publisher Taylor & Francis at the editor's and author's request (Lusher, 2017). Among the interesting aspects of this case is precisely that the paper was published in the journal's Viewpoints section, that is, more or less explicitly as a controversial opinion piece—and that this positioning by the editor, this method of placing editorial 'scare quotes' around the paper, did *not* stave off criticism of *Third World Quarterly*. In other words, those who protested against *Third World Quarterly* deemed Gilley's arguments sufficiently offensive and dangerous as to mandate that they not be published in any form.

I suspect that it is actually impossible to write a closely argued article in defense of colonialism from the perspective of the colonized people, i.e., an article that does not merely highlight positive aspects or outcomes of colonialism but that argues, as Gilley does, that decolonization ought never to have occurred and that colonized peoples are better off for having been colonized. It is possible that Gilley is correct that colonized peoples are better off in *per capita* terms (as also documented in part by Bertram (2007) and Armstrong and Read (2002)), yet as Malik (2018) notes, this only applies to the colonized peoples who escaped being massacred, enslaved, and in some cases subjected to total genocide.

The main issue, however, with Gilley's paper was not its poor scholarship. After all, there is a lot of poor scholarship out there, and most of it receives little comment. The reason Gilley's paper attracted the attention it did was that it made an argument that many people in certain sections of academia regard as unjustifiable under any circumstances and in any terms.

Outsider perspectives and exclusionary approaches

We thus return to Pöllath's (2018) 'Revisiting island decolonization'. To avoid any ambiguity, I wish to make clear that Pöllath's paper is very different from that of Gilley. Pöllath does not seek to defend the colonization process or argue that colonialism was or is a good thing. He instead seeks to differentiate "between decolonization in terms of process and self-government in terms of the end result" (Pöllath, 2018, p. 235), in light of the negotiated forms of continued nonsovereignty and free association across the USA-affiliated territories in the Pacific. So far, this is in line with much of the current island studies scholarship (e.g., Baldacchino, 2010a; Grydehøj, 2016a; Hepburn & Baldacchino, 2016; Pugh, 2017; Veenendaal, 2015). Over the course of the paper, Pöllath (2018, p. 247) goes on to argue that, from the legal and constitutional perspectives of 'high politics', "decolonization has above all become a historical term and unfitting for the new relationships that have emerged in the Pacific since the 1970s."

Pöllath's argument appears reasonable enough when taken on its own terms, and it seems churlish to insist on taking his argument on other terms than were intended. Pöllath (2018, p. 247) even recognizes the legitimacy of protests against the narrow scope of his analysis, given that an approach "based on constitutional and political dimensions [can be]

criticized for its focus on decisions made in the metropolitan power." Unlike Gilley, Pöllath does not speak of what was right and what was wrong, and he does not seek to convince colonized peoples that they have been bamboozled by their Indigenous political elite. All Pöllath does is contest the continued applicability of 'decolonization' as a concept from the perspective of constitutional law developed in the metropole.

As long as we are clear about the terms of the debate, why should this approach be problematic? Island studies may have emerged as a field by seeking to 'study islands on their own terms', but that is not really an argument against someone else studying islands on other terms. Indeed, as Pöllath's paper shows, the complexity of island histories is such that, quite often, no clear distinction can be made between the terms of the mainland and those of the island. Islands have for so long and so thoroughly been dreamed of, desired, and rendered symbolic by mainlanders (and, indeed, islanders living elsewhere) that it is impossible to untangle island epistemologies from mainland ones (Baldacchino, 2008). Moreover, dreams of ideal islandness that originated on the mainland may be localized, embraced, and reproduced, ultimately clashing with alternative local visions of islandness (Lee et al., 2017).

What, then, can be meant by the call for a 'decolonial island studies', which has become an editorial cornerstone of *Island Studies Journal*? When introducing this call, Nadarajah and Grydehøj (2016, p. 240) state, a little unhelpfully, that "The task of decolonization remains unfinished, and is perhaps unfinishable":

> The difficulties inherent in this process are perhaps nowhere as evident as in attempts to balance the competing demands of a Western-oriented 'modernity'—of fitting into the globalized world—and the desire to maintain and revitalize indigenous, non-Western traditions. Thus, for example, the urgent need for intellectual decolonization can come into conflict with struggles to create an autonomous intelligentsia in former colonies. The creation of a Westernised indigenous elite and the further undervaluation of indigenous knowledge are frequently and problematically coupled with colonized people's efforts to achieve self-determination and stand as equals among other nations. […] In this cycle of hegemony, coloniality lurks, ever present. As Androus and Greymorning (2016) warn, even the project in which we are now engaged—the advancing of an island studies perspective on decolonization—risks reinforcing colonial values.

Bearing this in mind, might not all perspectives be equally valid and worth hearing?

Within island studies, it has been argued that some voices should not be heard at all. Most prominently, *Island Studies Journal* 11(2) included Androus and Greymorning's (2016) trenchant critique of those who seek to use the colonizer's administrative apparatus to achieve Indigenous goals, a paper that is at once incisive and self-defeating. These authors argue that the empowerment provided by the kinds of creative practice of nonsovereignty advocated by some in island studies (Baldacchino, 2010a, 2010b, 2006; Grydehøj, 2018, 2016b; Overton & Murray, 2014; Prinsen et al., 2017) is illusory because any submission to metropolitan power structures denies an inalienable Indigenous sovereignty that demands political independence.

Although asserting an important point, Androus and Greymorning's (2016) perspective ultimately narrows the scope for legitimate exercise of Indigenous sovereignty, with the argument boiling down to an insistence that Indigenous islanders are free to make any choices they want—just so long as their choices are the right ones. If, as I would argue, non-Indigenous peoples possess the power to make strategic compromises regarding their sovereignty, then why should Indigenous peoples be any less empowered? Androus and Greymorning's approach represents an attempt to cope with the "competing demands" highlighted by Nadarajah and Grydehøj (2016) simply by defining some of these demands into oblivion: If the choice to remain nonsovereign can never be a choice at all but is instead inevitably a machination of colonial coercion, then it becomes quite easy to determine which demands are worth

considering. Then it does not matter how many or how few descendants of colonized peoples on any individual island desire political independence: The claim of sovereignty is absolute. This is one Indigenous proposition for how to 'finish' decolonization. It is the polar opposite of Pöllath's metropolitan conclusion that the USA's decolonization in the Pacific is done and dusted simply because the USA's own definition of 'colonialism' no longer fits.

Both conclusions are intentionally limited in perspective, yet, because one is self-consciously an island and Indigenous perspective (Androus & Greymorning, 2016) and the other is self-consciously a mainland and metropolitan perspective (Pöllath, 2018), many island studies scholars will find themselves erring on the side of the former. After all, it is appealing to see ourselves as part of the process of righting the wrongs of the colonial writing of history, even if "uncritical reference to imposed violence may be just as mythical and totalizing as the imperial narrative it has sought to replace" (Baldacchino, 2010b, p. 189). In the end, although I feel that Androus and Greymorning get it wrong on a very important point, I also feel that this is probably outweighed by what they get right.

Figure 1: Sermitsiaq, seen from Nuuk, Kalaallit Nunaat. (© Adam Grydehøj)

Some introspection

One year ago, sitting as I am now in an office at Ilisimatusarfik, the university of Kalaallit Nunaat (in English, Greenland), I was pondering these same seemingly intractable problems with regard to this highly autonomous subnational island jurisdiction of Denmark. And I wrote:

> There are so many visions, so many possible futures […] What is progress, and what is regression? What is development, and what is decline? Whose voice do you hear when you listen? (Grydehøj, 2017, p. 12)

One thing is to hear voices; another is to know which ones are worth listening to. What I had in mind at the time was that, in the context of Kalaallit Nunaat, we ought to be listening to the Kalaallit (Greenlandic Inuit) rather than to well-meaning foreigners. Yet here, today,

I choose to listen to myself, another well-meaning foreigner. Why should my voice matter? My voice is not a Kalaallit voice but a metropolitan one. Why should anyone listen to me? And should I actually just shut up and let other people speak?

I cannot answer that. In Kalaallit Nunaat, there are some people who wish me to speak, perhaps precisely because my voice is neither Kalaallit nor Danish. I come (it may be supposed) without prejudice. My voice cannot so easily be dismissed as a product of bitterness and regressive ethnonationalism.

Yet this is a matter of political strategy. It is not a moral argument. The fact that some (not all) Kalaallit regard my voice as convenient has no bearing on whether it *should* be part of Kalaallit Nunaat's political discourse. Might my voice in fact be especially pernicious, given that it valorizes a particular global scholarly ideal? As Jonathan Pugh (2013) has shown, efforts to give islanders 'voice' all too often amount to representatives of the metropole trying to convince islanders to speak in a metropolitan voice because this would make it easier for the metropole to hear them. Navigating the tensions of using metropolitan methods to promote Indigenous methodologies, Linda Tuhiwai Smith (2013 [1999]) argues that the very foundations of research and scholarship are inextricably rooted in colonialism and the West—and she inspires a new generation of Indigenous scholars while garnering respect from the wider scholarly community. Seeking an Indigenous scholarly voice, Manulani Aluli Meyer (2003) rebels against the constraints of Western ways of knowing and expressing knowledge—and her voice risks being regarded as a primary source, as evidence of a way of Indigenous thinking, rather than as an academic commentary upon the relationship between Western and Indigenous epistemologies. Pursuing improvements in practice, Karla Jessen Williamson (1992) advocates integrating Indigenous worldviews into childhood education in Indigenous communities—yet she too must justify herself within the very epistemological framework that she deems insufficient or inappropriate.

If my voice is used to transmit (some) Kalaallit voices that currently go unheard, then it might be doing some good. If (selected) Kalaallit voices come to be interpreted within the framework of my Western, metropolitan mindset, then I am uncertain that my effect is a positive one. Whether certain Kalaallit find my voice useful is beside the point. All voices may not be equally valid in all contexts.

There are no easy answers. Even in a land such as Kalaallit Nunaat, which was never subject to settler colonialism, it is unclear who should be regarded as Kalaallit. Now that the nation-building process is well under way, divisions in society are becoming increasingly clear. Some argue that children of mixed Danish-Kalaallit unions do not truly hold a stake in the nation. Some make language the defining characteristic: If you speak Kalaallit, you are in; if you do not speak it, you are out. For others, the privilege of having been born into a family that was or has become part of Kalaallit Nunaat's political and economic elite should bar one from having voice. For others still, educational qualifications and professional expertise may grant rights to a public hearing that trump rights accrued on account of Kalaallit ethnicity.

Cases of interethnic conflict in the Solomon Islands (which has suffered from colonial archipelago-building processes) and Fiji (where the importation of colonized labour has prompted interethnic strife) highlight the difficulties that can be involved in determining who deserves a voice, long after the colonizer has departed. Indigenous opinions, policies, and solutions are not automatically 'right' by virtue of their being indigenous. There must be an opportunity to challenge Indigenous actions if they are aggressive, unfair, or even simply ill-advised. Whatever the answer is, it does not involve shutting down debate.

What, then, is the problem with Pöllath's paper or even that of Gilley? Is the only difference between them and me that I seek refuge in a different ivory tower than they do by presuming to give voice to islanders and Indigenous peoples? Is it simply a case of me being less intellectually honest with myself concerning my own culturally conditioned limitations? Pöllath (2018) acknowledges the limitations to his perspective. In my academic writing, I generally do not.

The importance of positionality

The key lies in understanding where one is positioned within the 'colonial matrix of power' (Mignolo, 2011). Reflecting upon fieldwork in a squatter settlement community in Malaysia, Nadarajah (2007, pp. 128-129) remarks:

> For most of us, some semblance of an 'insider' can be achieved after a considerable amount of time and extended periods of visits and a deepening of that which is initially unfamiliar. Yet there is always a field of ambiguity—of moving between being an insider and also an outsider, or partial insiders—positions invoked and orchestrated too by the very participants in the research study. […] The porousness of places and communities, and more importantly the fact that they evolve and take shape through multiple interrelationships with myriad differently positioned others (which includes the fieldworker) are by definition, constitutive of contemporary social life.

Such an analysis is not limited to the realm of ethnographic research. After all, the economist (working with data sets supplied by a state statistics authority), the legal scholar (interpreting laws that were formulated through a lengthy historical process of negotiation between parties, peoples, and countries), and the literary scholar (undertaking close readings of texts that arose from particular social contexts) are equally engaged in constructing their fields. And if they maintain their focus for long enough, they too may begin to feel like 'insiders' in a sense. The difference, perhaps, is simply that Nadarajah's (2007) 'outsider within' fieldworker is more directly confronted by her ambiguous, ambivalent, and 'in-between' status. For there will ultimately come times when the fieldworker's objects of study resist the globalizing tendencies inherent in the globalized academic endeavour—when people in the field push back to remind the researcher that, while her voice is (one might hope) pleasant, welcome, and perhaps even useful, it is not and can never be the voice of an unalloyed 'insider'. The very act of researching distances the fieldworker from the field-as-lived-experience. The very act of determining whose voices are worth hearing from a research perspective constructs the field in one's own image. This is true whether one studies one's home town, a city on the East Coast of the USA, or a village on a 'remote' Pacific atoll. The impulse to move from the outside to the inside is a positive one even if it is—like genuine decolonization—unachievable. The researcher cannot seek to remove bias one way or another, can never succeed in dissolving power relationships. Nevertheless, by being aware of her position, she can perhaps come to understand the limits to her voice.

It is important to know one's own position as a researcher and to determine what rights and restrictions accompany (or ought to accompany) this position. Yet such determinations will inevitably vary on a personal level. Willingness to 'act' the insider is not always indicative of insufficient reflexivity, just as an insistence on taking an outsider's perspective is no guarantee of sufficient reflexivity.

We, as readers of academic research, are free to choose which voices we deem worth listening to, which positions are relevant in any given context. When considering island and Indigenous issues, it is, to my mind, no more reasonable to seek to exclude all non-island and non-Indigenous voices than it would be to seek to exclude all island and Indigenous voices. It is perfectly possible for social, political, cultural, economic, and environmental processes that occur in one place to be of interest to individuals in another place and for those outsiders to have legitimate reasons for seeking to make their voices heard. The USA *does* have strategic interests in the Pacific region, and even if some may feel that these metropolitan interests only incompletely coincide with the interests of Pacific islanders, it makes sense for the interests of the USA to play a role in discussions concerning the Pacific region. Similarly, French

perspectives on Pacific islands may be simultaneously problematic and relevant to island lives (Favole & Giordana, 2018). If, for example, we accept the concept of 'world heritage', then we must admit that sometimes we will care deeply about things (species, buildings, landscapes, intangible culture) that concern others more directly than they concern us.

The present issue of *Island Studies Journal* provides another illustration of the impossibility of making absolute determinations regarding which voices are worth hearing in any given context. Helen Kapstein's (2018, pp. 305-306) review of the edited volume *Tourist utopias* (Simpson, 2017) concludes by highlighting the book's dependence on funding by the casino industry in Macau, including "mega-billionaire, mega-casino owner, mega-donor Sheldon Adelson (lately with a heavy hand in U.S. G.O.P. electioneering and underwriter of the proposed relocation of the American embassy in Israel)." Kapstein asks: "What does it mean to theorize the tourism industry from the inside?" This question is worth asking, but Kapstein's approach suggests positional difficulties of its own. Sheldon Adelson is an American who owns businesses in Macau and is thus an outsider, yet it is generally understood that the people of Macau have benefited significantly from the territory's gaming industry. If Macau, a special administrative region of China, can be studied as an island city (e.g., Kwong & Wong, 2017; Sheng, 2016; Sheng et al., 2017), and if island studies ought to advocate islanders' interests, then might it not in itself be problematic to ask researchers to prioritize the needs of Americans and Palestinians over those of the people of Macau? The people of Macau vanish in Kapstein's brief critique, just as surely as Pacific islanders vanish in all too many discussions of military strategy and geopolitics. Whose voice do you hear when you listen to Macau? This is not intended as an attack on Kapstein, who is an astute scholar and has written extensively on postcolonialism and islands (Kapstein, 2017). The point is instead that finding the right position in the process of 'centring' islands is difficult even for the experts.

Figure 2: Hotel Grand Lisboa, between residential housing blocks, Macau. (© Adam Grydehøj)

Toward an editorial policy

No one needs to privilege metropolitan voices over island and Indigenous voices. From the perspective of island studies as a research field, there is justified reluctance to listen to exclusionary voices from the metropole—to voices like that of Gilley, metropolitan voices that seek to bar islanders and Indigenous peoples from having their own voices. I thus think it unlikely that *Island Studies Journal* will ever publish a paper resembling Gilley's defence of colonialism. Most cases are not so clear-cut, however.

Substantial discussion within *Island Studies Journal*'s editorial board reached the consensus that Pöllath's (2018) paper was not problematic in the manner of Gilley's paper; while Pöllath takes a metropolitan perspective, he does not seek to delegitimize island and Indigenous perspectives. Some editorial members did not find Pöllath's paper useful or relevant, but if a journal introduces the editorial policy of only publishing pieces that everyone finds useful and relevant, it will quickly find itself with nothing to publish. It was ultimately decided that Pöllath's research is reasonable when taken on its own terms and that these terms are not so antithetical to the aims of *Island Studies Journal* as to prevent the article from appearing in the journal. We can take a firm editorial stance against exclusionary practices emanating from the metropole but not against metropolitan perspectives as a whole—especially given that a great many researchers in island studies embody these metropolitan perspectives, even as they resist them.

If we are willing to grant a degree of editorial leeway to authors such as Androus and Greymorning (2016), who pursue their own form of exclusionary discourse, it is because we can recognize their approach as 'punching up', as seeking to disrupt reigning and problematic power structures. Again, no one is forced to agree with Androus and Greymorning, and it may make sense to highlight—however belatedly—aspects of their analysis that ought to give us pause. Yet bearing in mind the complexity of identifying what, precisely, islands' 'own terms' are, there can be no doubt that Androus and Greymorning are seeking to engage with islands on these terms whereas authors such as Gilley are not. Androus and Greymorning furthermore do so in a reasonable manner.

It is important that *Island Studies Journal* remains a forum that is open to reasonable and fair research from all perspectives, including from perspectives to which many of the journal's readers are opposed (e.g., Pöllath, 2018). It does no one any good for the journal to become a mere echo chamber of self-anointed island and Indigenous voices. There may be circumstances in which the gravity of the conditions being discussed and the novelty of the approach justify the journal also providing a platform for reasonable but *unfair* research (e.g., Androus & Greymorning, 2016)—just so long as this research is positioned in such a manner as to potentially make a productive contribution to island perspectives, in spite of its flaws.

Due precisely to the complexities of positionality, *Island Studies Journal*'s editorial board furthermore established the following policy in 2017: "Papers that focus on one or more Indigenous communities are subject to an enhanced review process: Either one or more of the double-blind peer reviews will be undertaken by a member of an Indigenous community or an additional, nonscholarly review will be undertaken by a member of an Indigenous community." This policy cannot, of course, guarantee that all the articles we publish regarding Indigenous communities will make all members of Indigenous communities happy. There is no such thing as perfection in scholarship.

Inasmuch as the above thoughts represent a wider editorial policy, it is an emerging one, and it will be subject to continued discussion within *Island Studies Journal*'s editorial board. There will always be a variety of opinions and positions within this editorial board as well, which is healthy for the journal and for the field of island studies as a whole.

None of us will ever achieve the ideally situated 'voice' in research. The best we can do is hear our own voices with a critical ear.

References

Aluli Meyer, M. (2003). Our own liberation: reflections on Hawaiian epistemology. *The Contemporary Pacific, 13*(1), 124-148. https://doi.org/10.1353/cp.2001.0024

Androus, Z., & Greymorning, N. (2016). Critiquing the SNIJ hypothesis with Corsica and Hawai'i. *Island Studies Journal*, *11*(2), 447-464.

Armstrong, H., & Read, R. (2002). The phantom of liberty? Economic growth and the vulnerability of small states, *Journal of International Development*, 14(4), 435-458. https://doi.org/10.1002/jid.886

Baldacchino, G. (2010a). *Island enclaves: offshoring strategies, creative governance, and subnational island jurisdictions*. Montreal, QC: McGill-Queen's University Press. https://doi.org/10.1002/jid.886

Baldacchino, G. (2010b). 'Upside down decolonization' in subnational island jurisdictions: questioning the 'post' in postcolonialism. *Space and Culture*, 13(2), 188-202. https://doi.org/10.1177/1206331209360865

Baldacchino, G. (2008). Studying islands: on whose terms? Some epistemological and methodological challenges to the pursuit of island studies. *Island Studies Journal*, 3(1), 37-56.

Baldacchino, G. (2006). Innovative development strategies from non-sovereign island jurisdictions? A global review of economic policy and governance practices. *World Development*, 34(5), 852-867. https://doi.org/10.1016/j.worlddev.2005.10.004

Bertram, G. (2007). Reappraising the legacy of colonialism: a response to Feyrer and Sacerdote. *Island Studies Journal*, 2(2), 239-254.

Favole, A., & Giordana, L. (2018). Islands of islands: responses to the centre-periphery fractal model in East Futuna (Wallis and Futuna) and the Belep Islands (New Caledonia). *Island Studies Journal,* 13(1), 209-222. https://doi.org/10.24043/isj.42

Grydehøj, A. (2018). Decolonising the economy in micropolities: rents, government spending and infrastructure development in Kalaallit Nunaat (Greenland). *Small States & Territories*, forthcoming.

Grydehøj, A. (2017). A future of island studies. *Island Studies Journal,* 12(1), 3-16. https://doi.org/10.24043/isj.1

Grydehøj, A. (2016a). Navigating the binaries of island independence and dependence in Greenland: Decolonisation, political culture, and strategic services. *Political Geography*, 55, 102-112. https://doi.org/10.1016/j.polgeo.2016.09.001

Grydehøj, A. (2016b). Toward subnational democracies of scale: Tensions between democratic legitimacy, legality, and effective governance. *Geopolitics*, 21(1), 22-42. https://doi.org/10.1080/14650045.2015.1114918

Hepburn, E., & Baldacchino, G. (Eds.) (2016). *Independence movements in subnational island jurisdictions*. London & New York: Routledge.

Jessen Williamson, K. (1992). *The cultural ecological perspectives of Canadian Inuit: implications for child-rearing and education*. Doctoral dissertation, University of Saskatchewan.

Kapstein, H. (2018). Review of 'Tourist utopias: offshore islands, enclave spaces, and mobile imaginaries'. *Island Studies Journal,* 13(1), 305-306.

Kapstein, H. (2017). *Postcolonial nations, islands, and tourism reading real and imagined spaces*. London & New York: Rowman & Littlefield.

Kwong, Y.H., & Wong, M.Y. (2017). State size and democratization in hybrid regimes: the Chinese island cities of Macau and Hong Kong. *Island Studies Journal,* 12(2), 113-126. https://doi.org/10.24043/isj.36

Lee, S.H., Huang, W.H., & Grydehøj, A. (2017). Relational geography of a border island: local development and compensatory destruction on Lieyu, Taiwan. *Island Studies Journal*, 12(2), 97-112. https://doi.org/10.24043/isj.33

Lusher, A. (2017). Professor's 'bring back colonialism' call sparks fury and academic freedom debate. *The Independent*, 12 October. http://www.independent.co.uk/news/world/americas/colonialism-academic-article-bruce-gilley-threats-violence-published-withdrawn-third-world-quarterly-a7996371.html.

McCall, G. (1994). Nissology: a proposal for consideration. *Journal of the Pacific* Society, 63-64(17), 93-106.

Malik, K. (2018). The great British Empire debate. *New York Review of Books*, 26 January. http://www.nybooks.com/daily/2018/01/26/the-great-british-empire-debate/

Mignolo, W.D. (2011). *The darker side of Western modernity*. Durham, NC: Duke University Press.

Nadarajah, Y. (2007). The outsider within: commencing fieldwork in the Kuala Lumpur/Petaling Jaya Corridor, Malaysia. *International Journal of Asia-Pacific Studies*, 3(2), 109-132.

Nadarajah, Y., & Grydehøj, A. (2016). Island studies as a decolonial project. *Island Studies Journal,* 11(2), 437-446.

Overton, J., & Murray, W.E. (2014). Sovereignty for sale? Coping with marginality in the South Pacific—the example of Niue. *Hrvatski geografski glasnik*, 76(1), 5-25. https://doi.org/10.21861/HGG.2014.76.01.01

Prinsen, G., Lafoy, Y., & Migozzi, J. (2017). Showcasing the sovereignty of non-self-governing islands: New Caledonia. *Asia Pacific Viewpoint*, 58(3), 331-346. https://doi.org/10.1111/apv.12151

Pugh, J. (2017). Postcolonial development, (non)sovereignty and affect: living on in the wake of Caribbean political independence. *Antipode*, 49(4), 867-882. https://doi.org/10.1111/anti.12305

Pugh, J. (2013). Speaking without voice: participatory planning, acknowledgment, and latent subjectivity in Barbados. *Annals of the Association of American Geographers*, 103(5), 1266-1281. https://doi.org/10.1080/00045608.2012.706571

Pöllath, M. (2018). Revisiting island decolonization: the pursuit of self-government in Pacific island polities under US hegemony. *Island Studies Journal*, 13(1), 235-250. https://doi.org/10.24043/isj.46

Ritzer, G., & Yagatich, W. (2012). Contemporary sociological theory. In G. Ritzer (Ed.) *The Wiley-Blackwell companion to sociology* (pp. 98-118). Malde: Wiley. https://doi.org/10.1002/9781444347388.ch6

Sheng, L. (2016). The transformation of island city politics: the case of Macau. *Island Studies Journal*, 11(2), 521-536.

Sheng, N., Tang, U.W., & Grydehøj, A. (2017). Urban morphology and urban fragmentation in Macau, China: island city development in the Pearl River Delta megacity region. *Island Studies Journal*, 12(2), 199-212. https://doi.org/10.24043/isj.25

Simpson, T. (Ed.) (2017). *Tourist utopias: offshore islands, enclave spaces, and mobile imaginaries*. Amsterdam: Amsterdam University Press.

Smith, L.T. (2013 [1999]). *Decolonizing methodologies: research and indigenous peoples*. London: Zed Books.

Veenendaal, W.P. (2015). The Dutch Caribbean municipalities in comparative perspective. *Island Studies Journal*, 10(1), 15-30.

Small island perspectives on climate change

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ABSTRACT: Islands and islanders are often misrepresented in the climate change discourse, oversimplifying their experiences and interactions with climate change. In reality, islands and islanders have far more complex relationships with climate change. This special thematic section presents eight papers that highlight local responses and localized impacts of climate change on islands, reiterating the importance of considering local community perspectives in small island contexts to overcome simplistic viewpoints. Such perceptions and perspectives are increasingly being recognized as offering a valuable contribution to climate change adaptation, particularly to counter the misrepresentation of small islands as vulnerable or passive, and the disregard for the fact that climate change is a global, as well as continual process. This special thematic section further demonstrates that island research is well placed to address the disproportionate concentration of perspectives and opinions of climate change from the Global North and adds to the calls for increased efforts to give a voice to island communities of all kinds.

Keywords: climate change, interdisciplinary research, island studies, perceptions, small islands

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Introduction

On 23 September 2017, Dominica Prime Minister Roosevelt Skeritt addressed the UN General Assembly and emotionally declared that his island "Eden is broken." He described the devastation wrought by the 2017 hurricanes as comparable to a war zone, and so he was reporting from the "frontlines of the war on climate change" (UN-News, 2017). While climate change is often at the forefront of geopolitical discussions, small island voices such as this are, for the most part, in the minority. This dearth of local small island perspectives can lead to the misrepresentation of island populations as vulnerable or passive, as well as disregard for the fact that climate change is a global and continual process.

While islands are among the places least responsible for the emission of greenhouse gasses leading to climate change, they are predicted to suffer a range of associated adverse effects, including increased temperatures, 'extreme' weather events, and sea level rise (IPCC, 2012; United Nations, 2010; UNEP, 2014). It is often described that the impacts of climate change will be more severe on islands due to their small size, limited resource base, growing populations, relative isolation, or economies of scale (see Briguglio, 1995; ECLAC, 2011; Méheux et al., 2007; Pelling & Uitto, 2001; United Nations, 2010). However, the discourse of island vulnerability and the frequently used archetype of islands at the mercy of climate

change is problematic, as it simplifies and misrepresents island realities by presenting the severity of climate impact as a focal point. The papers presented in this special thematic section demonstrate that in reality islands and islanders have considerably more complex relationships with climate and climate change. This special thematic section therefore attempts to overcome the simplistic viewpoint by examining the perceptions of islanders themselves.

While there is not adequate space to fully dissect the term 'island' here, the authors recognize the imprecise definition of 'island' (see Jędrusik, 2011), taken in the broadest sense in this special thematic section in order to look beyond SIDS alone. Research on perspectives on and perceptions of climate change from island communities of all kinds (and island research more broadly) has typically been on the periphery, marginalized, or ignored. Increasingly, small islands are being portrayed as 'canaries in the coal mine' (Hanna & McIver, 2014), the first to experience the impacts of climate change and therefore the first to offer potential insights into adaptation (Thompson, 2008).

Simplistic island tropes should be avoided in research into island adaptation and the default position of the islands and islanders themselves being defined and encapsulated by their peripheral, immobile, and isolated nature should be rejected. Island research has repeatedly shown that reality differs strongly from such tropes (Grydehøj, 2014), and islanders can also be characterized by their movement and agency (Bernardie-Tahir, 2014). Moreover, considering the diversity of islands across the globe, lumping small islands together into one category (for example as Small Island Developing States (SIDS)) disregards the diversity that exists, marginalizing outliers and inconsistencies in descriptors (Kelman & West, 2009). This complexity reveals a need to look beyond simple metrics or measurements. For example, in a comparison of location-controlled Gross Domestic Products (GDP) between SIDS and other states, SIDS actually had higher GDPs (Easterly & Kraay, 2000), so clearly economic metrics such as this do not tell the whole story, and these 'conventional wisdom' one-dimensional labels of islands are often misleading.

The potential impacts of climate change on small islands remain grave, but while this should not be forgotten, it is important to avoid immediately associating 'islandness' with vulnerability and 'problematizing' small islands (Kelman & Khan, 2013). Smallness as a characteristic does not automatically result in vulnerability (Baldachino, 2005; Kelman, 2007). Often, the same descriptors used to justify the labelling of an island as vulnerable, also result in characteristics of resilience. For example, isolation and small population size are suggested as indicators of vulnerability due to the danger of a single physical hazard impacting a large proportion of total population, and the prospect of relief or aid being far away, yet community cohesion often develops out of this same characteristic (Gaillard, 2007). Equally high exposure to physical environmental stressors over long periods of time clearly presents vulnerability, yet rich local knowledge can result from long histories of responding to these risks (Mercer et al., 2012; Walshe & Nunn, 2012).

One key emerging question is: Does the vulnerability rhetoric surrounding island communities invite adaptation or promote a popularized doomsday approach? Studies of sea level rise on islands are compelling and sometimes go 'viral' (see for example Albert et al., 2016 and the resultant reporting; Jun, 2016). Linked to the image or idea of sinking islands, there is increasing interest in the potential for migration associated with climate change, which is explored in a growing body of literature (Burkett, 2011; Klepp & Herbeck, 2016). However, while there is risk of inundation, the narrative of islands sinking or disappearing as well as the 'canary in the coalmine' framing can result in an "eco-colonial gaze" (Farbotko, 2010), where island self-determination is undermined by global, academic, or diplomatic attention and representation as a microcosm.

Much of the climate change discourse regarding small islands has been based on global or regional studies predicting higher sea levels (Walsh et al., 2012) or sea surface temperature (Ruosteenoja et al., 2003; IPCC, 2013). While of course relevant, the application of global

scale environmental change data to local level island communities often does not align. Therefore, drawing broad-brush conclusions on the implications of climate change for all small islands is likely to create issues. Each island experiences climate change differently depending on historic precedents and local context, and so caution is needed when extrapolating local findings to the wider context.

There is an important difference, however, between the top-down application of global data to islands and looking for wider connections emerging from island contexts and research. As noted by Grydehøj (2017, p. 8), the question of scale and the importance of expanding the reach of island studies research is essential to avoid "missing the forest for the trees, the archipelago for the islands." Collections of research (this section included) might benefit from being viewed as inter- and tele-connected, as portrayed by Hau'ofa (1993) as a 'sea of islands', from which common and shared lessons can be drawn. Certainly, islands are already and increasingly acting together at the policy level in response to climate change. For example, in 2016, President Taneti Maamau of Kiribati and other Pacific Island leaders pushed for early entry into the Paris Agreement at the United Nations General Assembly. The consideration of both a highly specific local context and a lens of larger scales should not necessarily be portrayed as in conflict, but rather as complimentary of each other.

The articulation of connection and scale (rather than the portrayal of islands as only isolated) is particularly important, since much of the discourse surrounding the vulnerability of islands assumes that they represent closed systems, which are insulated from global connections. In fact (particularly considering the ubiquitous spread of neo-liberal capitalism) closed systems do not exist, and instead islands are often 'cross-roads' for trade and tourism, partly due to their insularity (Baldacchino, 2004). The consideration of scale is also important because both risk and characteristics of vulnerability and resilience emerge from processes and loci which can be distant in space and time (Cutter & Finch, 2008, p. 76), both exogenous and indigenous (Lewis, 2009), and sometimes (particularly in regard to climate change) are of no fault of the islanders themselves. Therefore both resilience and vulnerability should not be assumed as inherent to SIDS, but identifying both is necessary and important (Kelman & West, 2009), and should be carefully applied when considering the often apodictic manner with which these labels are ascribed.

Therefore, perhaps island studies research must ask how it can provide progressive investigations while balancing the daily needs of island communities with the realities of climate change. This special thematic section consists of papers that focus on island perspectives on and perceptions of climate.

The importance of considering local island perceptions on and experiences of climate

As responses to climate change need to be grounded in local perceptions and understandings, such perceptions are increasingly valorized as offering a valuable contribution to understanding the effect and impact of climate change (Glantz, 1988; Leiserowitz, 2006; Lindell & Perry, 2003). It is also important to note that the examination of local perceptions and the interactions between humans, climate, weather, and the environment are not new (for early literature, see Glantz, 1986; Watsuji, 1988; Weickmann & Seybold, 1940). Local perceptions and perspectives are also important due to the danger of misattributing environmental changes, such as sea level rise, to climate change alone, when instead a combination of local and global factors may be the cause (Ballu et al., 2011; Webb & Kench, 2010). Whether or not local perceptions or attributions are scientifically 'accurate', they guide and influence the degree and nature of actions taken at the community level, including adaptation and responses to change (Lewis, 1990; Mortreux & Barnett, 2009; Nunn, et al., 2016) and therefor need to be fully understood.

In order to adequately understand and account for local perceptions of climate and climate change, a *longue durée* approach is suggested. This is an examination of history that focuses on the long-term structures and combines elements of both event and process and an analysis of historical discourses in an effort uncover the long-standing and slowly (often imperceptibly) changing relationships between people, culture, and the world (García-Acosta, 2016). A *longue durée* offers an insight into past responses to climate on islands and can provide valuable information today for societies that must cope with similar challenges (Bankoff, 2004; Glantz, 2003). It also positions climate change impacts in the context of other factors, natural processes, and patterns, and in so doing exposes that both share the same root vulnerability (O'Brien et al., 2004). This shows that the vanishing of islands is a continual phenomenon with historical precedent, which can sometimes be uncovered by local knowledge or island geo-mythology (Nunn, 2009). Such an approach can also deliver an analysis of the development and interactions of small island discourses over time (Grote, 2010), as well as an understanding of social adaptation processes that unfold across long periods (Adamson et al., 2018; Bankoff, 2004; Glantz, 1988).

Moreover, while there is a growing body of literature concerning dire climate change forecasts, imminent exposure to climate change effects, and the lack of political and related resources for coping with those effects (Betzold, 2010; Docherty & Giannini, 2009; Kothari, 2014), for the most part this concerns island countries and SIDS. In many cases the extraterritorial lands of primarily mainland countries—whether near or far—are left at the margins of analyses, raising many questions concerning the postcolonial experience of climate change for 'overseas' territories, dependent islands, or islands which are not SIDS.

This again demonstrates the importance of a *longue durée* perspective, considering small islands, colonial history, and their interaction (and power dynamics) with industrial nations. Many small islands were formally colonized by nations that now play pivotal roles in climate politics on the international stage. For example, Paris hosted the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in December 2015, pushing its own central government's agenda. Martinique and Guadeloupe are administered as overseas departments of France. However, Martinique and Guadeloupe experience, and will continue to experience, very different climate change impacts than mainland France. This rightly engenders questions regarding the role of France in the climate debates and concerns of power and status.

This special thematic section asks: What does climate change mean for small island communities? What are the everyday climate change-related impacts felt by islanders? This special thematic section delivers multidisciplinary examples of research that demonstrate the importance of new approaches and perspectives, as well as locally grounded research. To best understand how climate change is perceived by islanders, the associated impacts are understood as the everyday, involving not only environment, but also social structures, island politics, local economies, or in sum, daily livelihoods.

Content review

The papers in this special thematic section examine a wide geographical range of islands (see Figure 1), with three in the South Pacific (Beyerl et al., 2018; Perkins & Krause, 2018; Perumal 2018), one in the Caribbean (Robinson, 2018), and one in the British Isles (Petzold, 2018). Two papers discuss islands groups which are extraterritorial lands and which are not SIDS (Ferdinand, 2018; Schwebel, 2018), and one takes a theoretical approach (Kelman, 2018).

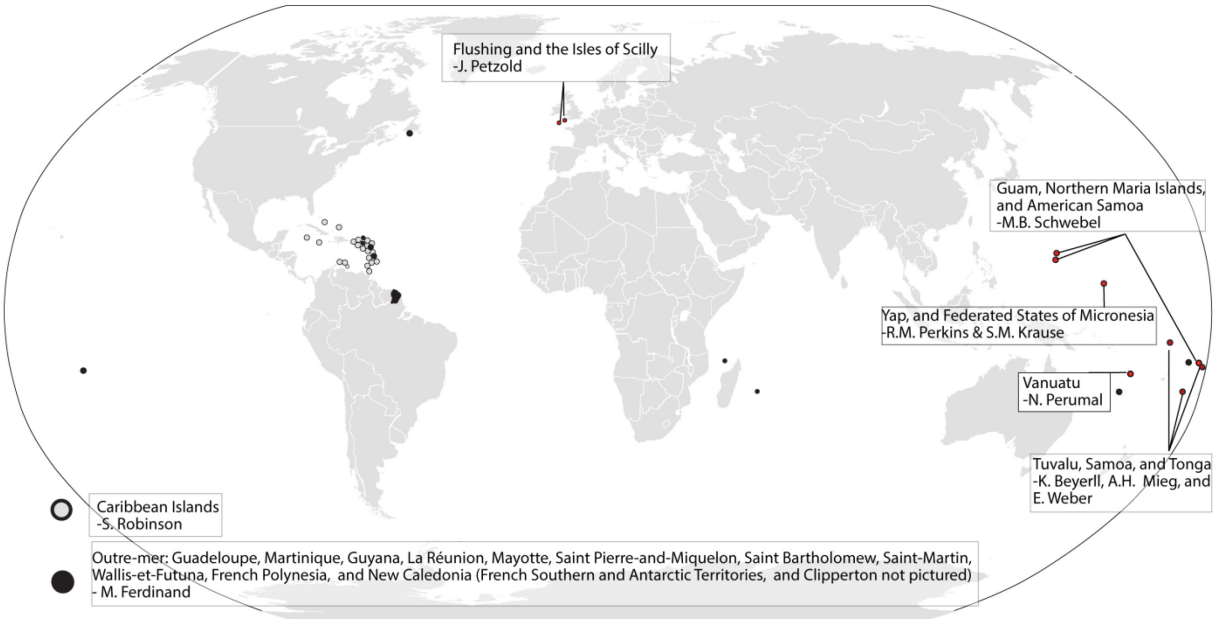

Figure 1: The different geographical focus areas of research papers in this section. (© Rory Walshe & Charlotte Eloise Stancioff, 2018)

The first paper, by Beyerl et al. (2018), involves a survey of communities in Tuvalu, Samoa, and Tonga, demonstrating that contrary to the mainstream perception that sea level rise is the primary concern, islanders instead prioritise drought, cyclones, and other water-related problems. The research also highlights how these communities have developed and implemented their own adaptation strategies and their expectations of the different stakeholders involved, including the government. The research demonstrates that the agency of local communities is by and large neglected, particularly in decisions regarding how to respond to such climate-related environmental change. Consequently, understanding (and accounting) for such perceptions of environmental change is not only needed to make effective and positive policy decisions but can also provide reliable data for scientific models.

Also from the South Pacific, Perumal (2018) draws from data collection in Vanuatu to challenge some of the reductionist narratives of climate change related migration and the often sensationalist use of the label 'refugee'. Specifically examining the perspective of ni-Vanuatu policymakers and climate activists, this research uncovers a reluctance to relocate at all due to climate change: Moving is truly a last resort, and the preference is for *in situ* adaptation and maintenance of cultural and livelihood continuity. These findings speak to the importance for self-determination and polices which place community perspectives at their centre.

The third paper from the South Pacific is authored by Perkins and Krause (2018), who conducted research in Yap State in the Federated States of Micronesia. This research demonstrates that the vulnerabilities and adaptive capacities within the separate islands of Yap State can only be understood as deeply rooted in the environmental and cultural components of their shared heritage. The paper also delves into the differences and potential interactions between the cultural heritage of the main island, and the outer islands. This again reinforces the importance of considering nuanced differences between and within island archipelagos and the importance of local scale when discussing climate impacts, since the cultural support networks described within will certainly be relied upon to lessen the severity of climate change impacts.

Moving from the South Pacific to the Caribbean and to a policy focus, Robinson (2018) provides an investigation of the perceptions of policymakers and the prioritised adaptation occurring at the national level and the limits to adaptation in Caribbean SIDS. The research reveals that Caribbean SIDS are focusing adaptation on hurricane impacts, rainfall, and

drought patterns, and that the majority of adaptations are being undertaken in the coastal areas, with the sectors of water and agriculture also being focused on, and that the largest barrier to adaptation remains financial. Robinson (2018) also reminds us that perceptions and perspectives are important from all sectors of society, from rural communities to the 'community' of policymakers.

The need for perspectives is of course not limited to developing country contexts, as demonstrated by Petzold's (2018) paper examining coastal adaptation in two case studies, a coastal town and an archipelago, in Southwest England. The research dissects how local social structures and conflicting influences affect adaptability to sea-level rise in coastal communities through the concept of ecotones, areas where ecosystems overlap. Similar to Perkins and Krause (2018), this research finds deeply embedded social relationships, local traditions, and collective memory shaped by the interaction of communities and their environment, while a range of influences and issues (from demographic changes, political forces and economic) determine how environmental change is addressed.

Figure 2: Houses close to the sea level on Upolu Island, Samoa, South Pacific (© Ilan Kelman)

In addition to place-specific research, wider regional analysis and the connection between common issues and solutions at a larger scale are needed. The papers described above have focused on perspectives and perceptions from the SIDS, however, as mentioned above, analysis of those islands excluded from this category, and the power dynamics involved in this exclusion, is not just welcome, but necessary. Such power dynamics are investigated in this special thematic section in two papers, the first by Ferdinand (2018) and the second by Schwebel (2018).

Ferdinand's (2018) paper delves into modern colonial and island perspectives in the case of France and the *Outre-mer*—specifically, the context of the vast differences between the climate change experienced by France and its administered territories. The article interrogates

the role France takes in climate debates and concerns of power dynamics and status of small islands. The paper suggests an epistemic shift which puts the emphasis on the climate change inequalities and disparities of the French overseas territories with the European mainland, both in terms of causes and consequences.

A complementary paper is provided by Schwebel (2018) who analyses perceptions from policymakers in three United States Pacific territories; American Samoa, Guam, and the Northern Mariana Islands, regarding the issues and opportunities of post-colonial positionality between territories and colonial powers. The research shows that climate change is not necessarily at the forefront of concerns in the territories, but the respondents also feel constrained in their responses to climate change due to the lack of representation from the United States Federal Government at meetings or to exclusions from such meetings due to territorial sovereignty. The research also finds that for many islanders, the status of US territory was considered an asset due to the hypothetical protection and funding available in the case of major disaster.

Our final paper by Kelman (2018) cautions researchers and readers to avoid the compelling and understandable (based on many bleak testimonies) narrative of islandness being inherently linked to vulnerability. Kelman (2018) calls attention to the counternarratives challenging the image of inevitable SIDS communities becoming refugees, and instead suggests that justice and self-determination can provide the nuance and balance which unites these papers.

Conclusion

There is still a disproportionate concentration of opinions from the Global North, rather than the small islands where changes in weather, precipitation, or sea levels cause some of the worst damage. Equally, the academic community has provided many physical, instrumental and modelling details of climate change, and yet how climate change is perceived at local scales and levels remains poorly quantified.

This special thematic section aims to demonstrate the potential for islands studies research to address this balance. The papers included show that different island groups have different priorities and needs, which are often not accounted for. Instead climate change programs tend to didactically pass down directives and crowd out issues which are perceived as greater local concerns (Baldacchino & Kelman, 2014; Walshe et al., 2017).

This special thematic section also adds to the assertion that broader climate change thinking (on islands and elsewhere) fails to acknowledge the diverse experience of climate risks, or the contested nature of many proposed solutions. Therefore, discussions about climate action should be based on this diversity of perceived risks and solutions (Forsyth, 2014). So far there is little evidence of this happening, and instead island communities are often uncritically approached, and any disagreements in perspective are smoothed over and social divisions are ignored (Auty, 2017; Baldacchino, 2013; Hoad, 2015; Hong, Wehi, & Matsuda, 2013; Leunufna & Evans, 2014; Persoon & Simarmata, 2014; Rapaport, 2006).

The eight papers in this special thematic section contribute to these calls. On the broadest scale, they show great diversity in the way different islands and groups understand, experience and view climate change. Our inevitable recommendation is to add to those before us (Hofmann & Lübken, 2015; Kelman, 2010; Lewis, 1990, 2009; Moncada et al., 2018) in calling for island scholarship to reject solipsism, and instead seek to understand the highly local and cultural perceptions, perspectives, and responses to climate change (Glantz, 1988; Hulme, 2016; Oliver-Smith, 1996; Rudiak-Gould, 2011, 2013).

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References

Adamson, G.C.D., Hannaford, M.J., & Rohland, E.R. (2018). Re-thinking the present: the role of a historical focus in climate change adaptation research. *Global Environmental Change*, 4(8), 195-205. https://doi.org/10.1016/j.gloenvcha.2017.12.003

Albert, S., Leon, J.X., Grinham, A.R., Church, J.A., Gibbes, B.R., & Woodroffe, C.D. (2016). Interactions between sea-level rise and wave exposure on reef island dynamics in the Solomon Islands. *Environmental Research Letters*, 11(5), 054011. https://doi.org/10.1088/1748-9326/11/5/054011

Auty, R.M. (2017). Natural resources and small island economies: Mauritius and Trinidad and Tobago. *The Journal of Development Studies,* 53(2), 264-277. https://doi.org/10.1080/00220388.2016.1160063

Ballu, V., Bouin, M.N., Siméoni, P., Crawford, W.C., Calmant, S., Boré, J.M., Kanas, T. & Pelletier, B. (2011). Comparing the role of absolute sea-level rise and vertical tectonic motions in coastal flooding, Torres Islands (Vanuatu). *Proceedings of the National Academy of Sciences*, 108(32), 13019-13022. https://doi.org/10.1073/pnas.1102842108

Baldacchino, G. (2013). Island landscapes and European culture: an 'island studies' perspective. *Journal of Marine and Island Cultures*, 2(1), 13-19. https://doi.org/10.1016/j.imic.2013.04.001

Baldacchino, G. (2005). Island Entrepreneurs: insights from exceptionally successful knowledge-driven SMEs from 5 European island territories. *Journal of Enterprising Culture*, 13(2), 145-170. https://doi.org/10.1142/S0218495805000100

Baldacchino, G. (2004). Moving away from the terms vulnerability and resilience in small islands. Wise Coastal Practices for Sustainable Human Development Forum, Paris, France: UNESCO.

Baldacchino, G., & Kelman, I. (2014). Critiquing the pursuit of island sustainability: blue and green, with hardly a colour in between. *Shima,* 8(2) 1-21.

Bankoff, G. (2004). Time is of the essence: disasters, vulnerability and history. *International Journal of Mass Emergencies and Disasters,* 22(3), 23-42.

Bernardie-Tahir, N. (2014), Opening up the island: a 'counter-islandness' approach to migration in Malta. Introduction: theorizing migration and counter-islandness in Malta, *Island Studies Journal*, 9(1), 43-56.

Betzold, C. (2010). 'Borrowing' power to influence international negotiations: AOSIS in the climate change regime, 1990-1997. *Politics*, 30(3), 131-148. https://doi.org/10.1111/j.1467-9256.2010.01377.x

Beyerl, K., Mieg, A.H., & Weber, E. (2018). Comparing perceived effects of climate-related environmental changes and adaptation strategies for Tuvalu, Samoa and Tonga, *Island Studies Journal*, 13(1), 25-44.

Briguglio, L. (1995) Small island developing states and their economic vulnerabilities, *World development*, 23 (9), 1615-1632. https://doi.org/10.1016/0305-750X(95)00065-K

Burkett, M. (2011). In search of refuge: Pacific islands, climate-induced migration, and the legal frontier. *Asia Pacific East West Report* (No. 98). www.eastwestcenter.org/sites/default/files/private/api098.pdf

Cutter, S.L., & Finch, C. (2008), Temporal and spatial changes in social vulnerability to natural hazards. *Proceedings of the National Academy of Sciences of the United States of America, National Academy of Sciences*, 105(7), 2301-2306. https://doi.org/10.1073/pnas.0710375105

Docherty, B., & Giannini, T. (2009). Confronting a rising tide: a proposal for a convention on climate change refugees. *Harvard Environmental Law Review*, 33(1), 349-403.

Easterly, W., & Kraay, A. (2000). Small states, small problems? Income, growth, and volatility in small states. *World Development*, 28(11), 2013-2027. https://doi.org/10.1016/S0305-750X(00)00068-1

ECLAC (2011). Study on the vulnerability and resilience of Caribbean small island developing states (SIDS). http://www.cepal.org/publicaciones/xml/4/45364/LCARL.354.pdf

Farbotko, C., (2010). Wishful sinking: disappearing islands, climate refugees and cosmopolitan experimentation. *Asia Pacific Viewpoint*, 51(1), 47-60. https://doi.org/10.1111/j.1467-8373.2010.001413.x

Ferdinand, M. (2018) Subnational climate justice for the French Outre-mer: postcolonial politics and geography of an epistemic shift, *Island Studies Journal*, 13(1), 119-134. https://doi.org/10.24043/isj.49

Forsyth, T. (2013). Community-based adaptation: a review of past and future challenges, *Wiley Interdisciplinary Reviews: Climate Change,* 4(5), 439-446.

Gaillard, J. (2007). Resilience of traditional societies in facing natural hazards. *Disaster Prevention and Management: An International Journal*, 16(4), 522-544. https://doi.org/10.1108/09653560710817011

García-Acosta, V. (2016). Disaster risk reduction including climate change adaptation in the longue durée. In J. Mercer, J.C. Gaillard, & I. Kelman (Eds.) *The Routledge handbook of disaster risk reduction including climate change adaptation* (pp. 203-213) London: Routledge.

Glantz, M.H. (2003). *Climate affairs: a primer.* Washington D.C.: Island Press.

Glantz, M.H. (1988). *An essay on the interactions between climate and society*. Boulder: National Center for Atmospheric Research.

Glantz, M.H. (1986), Understanding how climate affect society and how society affects climate. Lecture notes for AMFUEL, 13 November, 1986.

Grote, J. (2010). The changing tides of small island states discourse - a historical overview of the appearance of small island states in the international arena. *Verfassung und Recht in Übersee / Law and Politics in Africa, Asia and Latin America*, 43(2), 164-191. https://doi.org/10.5771/0506-7286-2010-2-164

Grydehøj A. (2017). A future of island studies, *Island Studies Journal,* 12(1), 3-16. https://doi.org/10.24043/isj.1

Grydehøj A. (2014). Understanding island cities, *Island Studies Journal*, 9(2), 183-190.

Hanna, E.G., & McIver, L (2014) Small island states: canaries in the coal mine of climate change and health. In C.D. Butler (Ed.) *Climate change and global health* (pp. 181-192) Wallingford: CABI. https://doi.org/10.1079/9781780642659.0181

Hau'ofa, E. (1994). Our sea of islands. *The Contemporary Pacific*, 6(1), 147-161

Hoad, D. (2015). Reflections on small island states and the international climate change negotiations. *Island Studies Journal*, 10(2), 259-262.

Hofmann, R., & Lübken, U. (2015) Introduction: special issue 'Small islands and natural hazards'. *Global Environment*, 8(1), 4-15. https://doi.org/10.3197/ge.2015.080101

Hong, S.K., Wehi, P., & Matsuda, H. (2013). Island biocultural diversity and traditional ecological knowledge. *Journal of Marine and Island Cultures*, 2(2), 57-58. https://doi.org/10.1016/j.imic.2013.11.005

Hulme, M. (2016). *Weathered cultures of climate*. London: Sage.

IPCC (2012). *Managing risks of extreme events and disasters to advance climate change adaptation: a special report of Working Groups I and II of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press.

IPCC (2013). *Climate Change 2013: the physical science basis: Working Group I contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. T.F. Stocker, D. Qin, G.K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, & P.M. Midgley (Eds.). Cambridge: Cambridge University Press.

Jun, C. (2016). Don't blame the Solomon Islands sinking all on climate change. *Popular Science*, 16 May. https://www.popsci.com/solomon-islands-study-author-downplays-climate-change-link

Jędrusik, M. (2011) Island studies. island geography. but what is an island? *Miscellanea Geographica* 15(1), 201-212. https://doi.org/10.2478/v10288-012-0012-7

Kelman, I. (2018) Islandness within climate change narratives of small island developing states (SIDS). *Island Studies Journal*, 13(1), 149-166. https://doi.org/10.24043/isj.52

Kelman, I. (2010). Hearing local voices from small island developing states for climate change. *Local Environment*, 15(7), 605-619. https://doi.org/10.1080/13549839.2010.498812

Kelman, I. (2007). The island advantage: practices for prospering in isolation. *id21 Insights*, 70. http://www.ilankelman.org/articles1/id21no70.pdf

Kelman, I., & Khan, S. (2013). Progressive climate change and disasters: island perspectives, *Natural Hazards*, 69 (1), 1131-1136. https://doi.org/10.1007/s11069-013-0721-z

Kelman, I., & West, J.J. (2009). Climate change and small island developing states: a critical review. *Ecological and Environmental Anthropology*, 5(1), 1-16.

Klepp, S., & Herbeck, J. (2016). The politics of environmental migration and climate justice in the Pacific region. *Journal of Human Rights and the Environment,* 7(1), 37-49. https://doi.org/10.4337/jhre.2016.01.03

Leiserowitz, A. (2006). Climate change risk perception and policy preferences: the role of affect, imagery, and values. *Climatic Change*, 77(1/2), 45-72. https://doi.org/10.1007/s10584-006-9059-9

Leunufna, S., & Evans, M. (2014). Ensuring food security in the small islands of Maluku: a community genebank approach. *Journal of Marine and Island Cultures*, 3(2), 124-133. https://doi.org/10.1016/j.imic.2014.11.001

Lewis, J. (2009). An island characteristic. *Shima*, 3(1), 3-15.

Lewis, J. (1990). The vulnerability of small island states to sea level rise: the need for holistic strategies. *Disasters*, 14(3), 241-249. https://doi.org/10.1111/j.1467-7717.1990.tb01066.x

Lindell, M. & Perry, R. (2003). *Communicating environmental risk in multi-ethnic communities*. London: Sage.

Méheux, K., Dominey-Howes, D., & Lloyd, K. (2007). Natural hazard impacts in small Island developing states: a review of current knowledge and future research needs. *Natural Hazards*, 40(2), 429-446. https://doi.org/10.1007/s11069-006-9001-5

Mercer, J., Kelman, I., Alfthan, B. and Kurvits, T. (2012). Ecosystem-based adaptation to climate change in Caribbean small Island developing states: integrating local and external knowledge. *Sustainability*, 4(8), 1908-1932. https://doi.org/10.3390/su4081908

Moncada, S., Briguglio, L.P., Bambrick, H., & Kelman, I. (2018). Guest editorial. *International Journal of Climate Change Strategies and Management*, 10(2), 214-216. https://doi.org/10.1108/IJCCSM-03-2018-184

Mortreux, C., & Barnett, J. (2009). Climate change, migration and adaptation in Funafuti, Tuvalu, *Global Environmental Change*, 19(1), 105-112. https://doi.org/10.1016/j.gloenvcha.2008.09.006

Nunn P.D. (2009). *Vanished islands and hidden continents of the Pacific*. Honolulu: University of Hawaii Press.

Nunn, P.D., Runman, J., Falanruw, M., & Kumar, R. (2016). Culturally grounded responses to coastal change on islands in the Federated States of Micronesia, northwest Pacific Ocean. *Regional Environmental Change*, 1(13), 428-439.

O'Brien, K., Eriksen, S., & Schjolden, A. (2004). What's in a word? Conflicting interpretations of vulnerability in climate change research. *CICERO Working paper*. https://brage.bibsys.no/xmlui/handle/11250/192322

Oliver-Smith, A. (1996). Anthropological research on hazards and disasters. *Annual Review of Anthropology*, 25, 303-328. https://doi.org/10.1146/annurev.anthro.25.1.303

Pelling, M., & Uitto, J.I. (2001). Small island developing states: natural disaster vulnerability and global change. *Global Environmental Change Part B: Environmental Hazards*, 3(2), 49-62. https://doi.org/10.1016/S1464-2867(01)00018-3

Perkins, R.M., & Krause S.M. (2018) Adapting to climate change impacts in Yap State, Federated States of Micronesia: the importance of environmental conditions and intangible cultural heritage, Island Studies Journal, 13(1), 65-78. https://doi.org/10.24043/isj.51

Persoon, G.A., & Simarmata, R. (2014). Undoing 'marginality': the islands of the Mahakam Delta, East Kalimantan (Indonesia). *Journal of Marine and Island Cultures*, 3(2), 43-53. https://doi.org/10.1016/j.imic.2014.11.002

Perumal, N. (2018) "The place where I live is where I belong": community perspectives on climate change and climate-related migration in the Pacific island nation of Vanuatu. *Island Studies Journal*, 13(1), 45-64. https://doi.org/10.24043/isj.50

Petzold, J. (2018) Social adaptability in ecotones: sea-level rise and climate change adaptation in Flushing and the Isles of Scilly, UK, *Island Studies Journal*, 13(1), 101-118. https://doi.org/10.24043/isj.17

Rapaport, M. (2006). Eden in peril: impact of humans on Pacific island ecosystems. *Island Studies Journal*, 1(1), 109-124.

Robinson, S.-A. (2018) Adapting to climate change at the national level in Caribbean small island developing states. *Island Studies Journal*, 13(1), 79-100.

Rudiak-Gould, P. (2013). *Climate change and tradition in a small island state: the rising tide*. London: Routledge.

Rudiak-Gould, P. (2011). Promiscuous corroboration and climate change translation: a case study from the Marshall Islands. *Global Environmental Change*, 22(1), 46-54. https://doi.org/10.1016/j.gloenvcha.2011.09.011

Ruosteenoja, K., Carter, T.R., & Tuomenvirta, H. (2003). Future climate in world regions: intercomparison of model based projections for the new IPCC emissions scenarios. *The Finnish Environment*, 644, 81.

Schwebel, M.B. (2018) Climate change perceptions and preparation in the United States' territories in the Pacific: American Samoa, Guam, and the Northern Mariana Islands. *Island Studies Journal*, 13(1), 135-184.

Thompson E. (2008) Acceptance speech by Senator Elizabeth Thompson recipient of 'The Champion of the Earth Award 2008': Latin America and the Caribbean United Nations Environment Programme, Nairobi.

United Nations (2010). *Trends in sustainable development: small island development states (SIDS)*. New York: UN Press.

UNEP (2014). *Emerging issues for small island developing states: results of the UNEP Foresight Process*. Nairobi: UN Press.

UN-News (2017). "To deny climate change is to deny a truth we have just lived" says Prime Minister of storm-hit Dominica. *UN Reports*, September. https://news.un.org/en/story/2017/09/566742-deny-climate-change-deny-truth-we-have-just-lived-says-prime-minister-storm-hit

Walsh, K.J.E., McInnes, K.L., & McBride, J.L. (2012). Climate change impacts on tropical cyclones and extreme sea levels in the South Pacific: a regional assessment. *Global and Planetary Change*, 80/81, 149-164.

Walshe, R.A., Chang Seng, D., Bumpus, A., Auffray, J. (2017). Perceptions of adaptation, resilience and climate knowledge in the Pacific: the cases of Samoa, Fiji and Vanuatu. *International Journal of Climate Change Strategies and Management*, 10(2) 303-322.

Walshe, R.A. & Nunn, P.D. (2012). Integration of indigenous knowledge and disaster risk reduction: a case study from Baie Martelli, Pentecost Island, Vanuatu. *International Journal of Disaster Risk Science*, 3(4), 185-194. https://doi.org/10.1007/s13753-012-0019-x

Watsuji, T. (1988) Climate and culture: a philosophical study. Tokyo: Hokuseido.

Webb, A.P., & Kench, P.S. (2010). The dynamic response of reef islands to sea-level rise: evidence from multi-decadal analysis of island change in the Central Pacific. *Global and Planetary Change*, 72(3), 234-246. https://doi.org/10.1016/j.gloplacha.2010.05.003

Weickmann, L., & Seybold, A. (1940). *Climate, weather, and man*. Leipzig: Limpert and Quelle & Meyer.

Comparing perceived effects of climate-related environmental change and adaptation strategies for the Pacific small island states of Tuvalu, Samoa, and Tonga

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ABSTRACT: Inhabitants of Pacific small island states are facing multiple socio-ecological pressures, with climate change being one of the most prominent. Nevertheless, the agency of local stakeholders in decisions on how to adapt to climate-related environmental change has been largely underappreciated in the climate change sciences as well as in policy decisions. We, therefore, conducted a survey study in Tuvalu, Samoa, and Tonga, asking specifically how residents perceive their situation regarding climate-related challenges, what adaptation strategies they have devised and implemented, and what they expect of governmental and nongovernmental organisations in these efforts. In contrast to the common perception that Pacific small island states are primarily threatened by rising sea levels, residents' perceptions indicate that drought, cyclones and other flood-related problems pose a far more imminent danger. Our results suggest that further research on those perceived environmental changes is advisable to provide reliable data for scientific models and policy decisions.

Keywords: perception, climate change adaptation, environmental change, Pacific small island states, Samoa, Tonga, Tuvalu

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Introduction

Inhabitants of Pacific small island states are facing multiple socio-ecological pressures. These arise from specific characteristics of island environments combined with modernisation and urbanisation, population growth, as well as increasingly globalised consumption patterns and lifestyles. The impacts of global climate change aggravate the situation (see Figure 1; Hay, 2013; Nurse et al., 2014; Barnett & Campbell, 2010; Barnett & Waters, 2016). The resulting challenges and diverse aspects of island vulnerability and resilience have received growing attention over the past years. Particularly since the debate on global climate change has gained momentum, specific focus has been placed on adaptation in Pacific island states as they are

often understood as outstandingly vulnerable and threatened in their long-term inhabitability (Barnett & Waters, 2016; Betzold, 2015; Lazrus, 2012; Farbotko, 2010; Nunn, 2009; Campbell, 2009; Kelman & West, 2009; Barnett & Campbell, 2010).

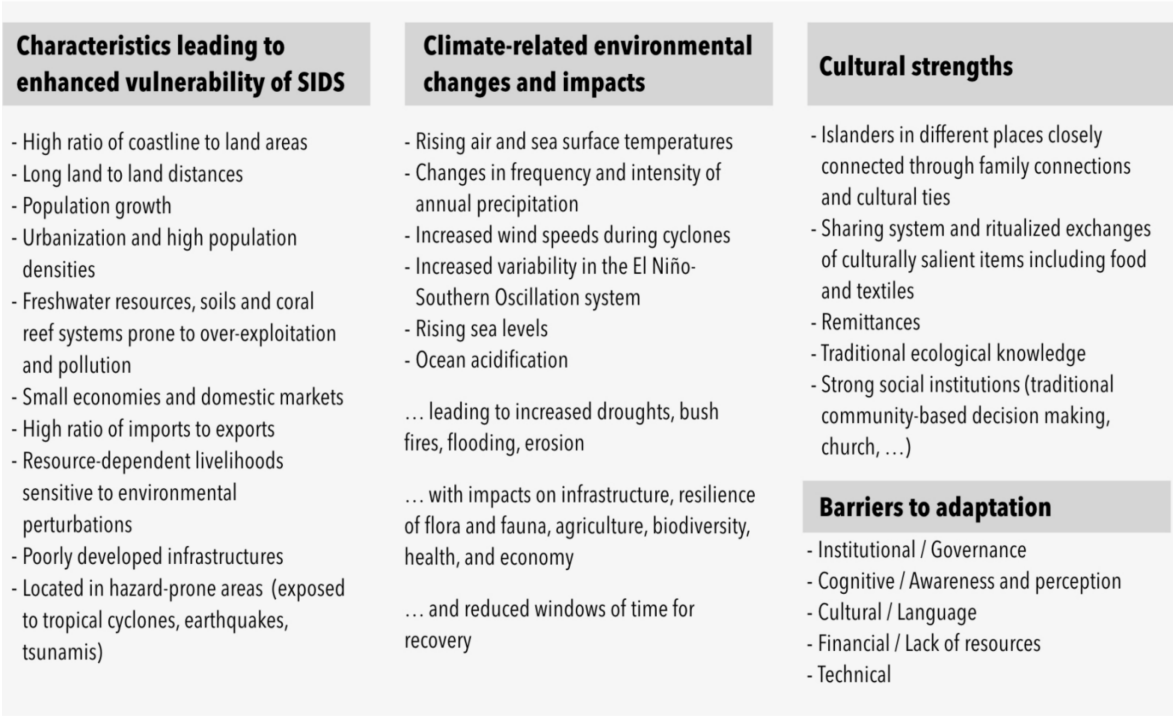

Figure 1: Summary of 1) characteristics of island vulnerability, 2) climate-related environmental changes and impacts, 3) specific cultural strengths, and 4) barriers to adaptation. (Compilation based on Barnett & Waters, 2016; Betzold, 2015; Kuruppu & Willie, 2015; Shackleton, 2015; McMillen et al., 2014.)

The focus on adaptation has resulted in a thorough investigation of needs, practices and barriers to adaptation in the context of historical developments, currently observed changes, and projected future challenges (Nunn, 2009; Grasso et al., 2014; Kuruppu & Willie, 2015; Betzold, 2015). Traditional practices of adaptation and modern technological opportunities, as well as questions of governance and communication have been examined in order to assess the abilities of the island communities to cope with impacts of rising sea levels or extreme weather events including storms, flooding, and drought (Kelman & West 2009; McMillen, 2014; Campbell, 2009; Lefale, 2010; Fakhruddin et al., 2015; Nunn 2009; Lata & Nunn, 2012; McNaught et al.; 2014). In light of the disruptive nature of climate-related environmental change, the benefit of integrating climate change adaptation and disaster risk management has been acknowledged, and community-based coping strategies are increasingly seen as advantageous and promising approaches (van Aalst, et al., 2008; Mercer, 2010; Gero et al., 2011; Pacific Community et al., 2016).

Among the diverse adaptation strategies that have been studied over the past years, specific attention has been paid to the controversial topic of large-scale resettlement of island inhabitants to other countries (Burson, 2010; Campbell & Warrick, 2014; Weber, 2014). Yet interestingly, most studies show that except for communities that already face severe coastal erosion or flooding due to subsidence, until now, other means of adaptation and more sustainable management are often not only possible, but also favoured by island populations before such drastic measures would need to come into play (Betzold, 2015; Barnett & O'Neill, 2012; Lazrus, 2012; Farbotko & Lazrus, 2012; Farbotko, 2005, 2010; Shen & Gemenne, 2011; Mortreux & Barnett, 2009; Donner, 2015; Connell, 2016). The results of

these studies exemplarily demonstrate that despite the fact that outsiders might view island environments as extremely vulnerable and retreat as a logical consequence, the international dialogue has often failed to include the diversity of local perspectives. Betzold (2015, p. 482) writes in her review of the literature on climate change, adaptation and small island states that "islanders' own perspectives, as well as comparative studies—comparisons across different islands, [and] different island states" are still largely missing from the peer-reviewed literature (see also McMillen et al., 2014; Kelman, 2010; Nurse, 2014). Similarly, Barnett and Waters (2016, p. 740) state that "the agency of people on islands is under-appreciated and under-researched, which results in assumptions of vulnerability, fragility, and low adaptive capacity, dominating climate change science and policy."

Betzold's observation can be broken down even further. A small number of authors has actually studied what kinds of climate-related environmental change people in Pacific small island states perceive and how much they are aware of climate change in general (Kuruppu & Liverman, 2011; Kuruppu & Willie, 2015; Lata & Nunn; 2012; Lebel, 2013; Aswani et al. 2015; Scott-Parker et al., 2016). Yet, it is striking not only that comparisons of potential differences in perceptions between island states are rare, but also that it has so far hardly been studied how islanders actually perceive their options to adapt: Though the perception of climate change itself is a prerequisite to adaptive behaviour, the perception and assessment of adaptation strategies, personal abilities, and self-efficacy, as well as people's expectations of other actors and institutions play an equally, if not even more important role in motivating protective action (Beyerl et al., 2016; Grothmann & Patt, 2005; Grothmann & Reusswig, 2006). Spiritual beliefs are among the few exceptions that have been discussed in this context as potentially hindering adaptive action (Nunn et al., 2016; Lata & Nunn, 2009; Kuruppu & Liverman, 2011; Kuruppu, 2009; Mortreux & Barnett, 2009; Lazrus, 2015; Rudiak-Gould, 2012, 2014). Apart from that, specific perceptions of self-efficacy and expectations that islanders have of other actors have hardly been studied and were scarcely considered in the design of communication approaches (McNaught et al., 2014).

As individuals naturally live embedded in a social context, individual behaviour is also affected by perceptions of the social environment and expectations that a person has of other people and institutions (Beyerl et al., 2016). In the context of climate change adaptation, other relevant stakeholders include local community members, but also larger institutions such as governments and nongovernmental organizations (NGOs). For example, expectations of aid and support are likely to shape people's perceptions of the need for personal protective action, understandings of responsibilities, and consequent behaviour (Barnett, 2008; Nunn, 2009; Barnett & Campbell, 2010; Kuruppu & Willie, 2015; McCubbin et al., 2015). So far, it has been described that donor organizations and adaptation finance have generated dependence on knowledge and funding that contributed to undermining adaptive capacity (Nunn, 2013; McNaught et al., 2014). Yet, despite the fact that adaptation can require modest technical and financial assistance to be effective (Limalevu et al., 2010), empirical data and systematic surveys on local residents' perceptions and expectations of donors and aid are underrepresented in the literature.

In order to contribute to a better understanding of adaptive behaviour and to compare perspectives across different island states, the current study aims to address the following questions: 1) How do citizens of three Pacific small island states perceive their being affected by different climate-related environmental changes? 2) What kind of adaptation strategies have citizens in these countries a) already implemented, and b) what are they planning for the future? 3) What do people think governments and NGOs can do to assist residents in coping with climate-related environmental change? 4) How do citizens of three Pacific small island states assess responsibilities for adaptive action, their own self-efficacy, and their own opportunities to adapt?

Method

Three island states to compare

Three Pacific small island states that represent the main geological formations of island types in the Pacific Island region (Barnett & Campbell, 2010) were selected for a comparison of islanders' perspectives on impacts of climate-related environmental change and strategies to cope with the challenges they perceive: 1) Tuvalu as one prominent example of an atoll island state, 2) Samoa as an example of islands of volcanic origin, and 3) a part of Tonga which serves as an example of a raised coral limestone island. All three island states are located in the tropical climate zone, with a wet season from November until April, during which tropical cyclones are a relatively common phenomenon, and a dryer season from May until October. However, the climate is characterized by a high year-to-year variability due to, for example, the El Niño-Southern Oscillation. Seasonal mean air temperatures for the period from 1950 to 2009 have been observed to increase significantly, and sea level has been rising by 4-6 mm per year (Australian Bureau of Meteorology and CSIRO, 2014). These trends are expected to intensify in the future. Annual and seasonal rainfall trends for the period of 1950 to 2009 are not statistically significant, but with tropical cyclones being expected to become more intense, extreme rain events are becoming more likely.

Interview guideline

A structured interview guideline with open and closed questions was designed in the English language. The survey templates were translated into Tuvaluan, Samoan, and Tongan languages by local research assistants, who also conducted the interviews either in their vernacular or in English. If necessary they also retranslated the responses. The questionnaire consisted of open questions about the impacts of environmental change on people's lives and respective coping strategies. In addition, closed questions were asked about the assessment of responsibilities, self-efficacy, and personal opportunities to implement coping strategies. Furthermore, respondents were asked about socio-demographic characteristics and challenges in everyday life. The quantitative closed questions had answer options in the structure of 7-point Likert scales reaching from 0 to 6 with the ends points 'not at all' – 'severely' or 'don't agree' – 'agree strongly'.

Sample

For each country, a team of three local research assistants was asked to interview 60 participants living close to the sea, covering a broad age range, with equal numbers of men and women. However, the samples vary in their composition (Table 1): With regard to age, for example, the mean values differ markedly, with 63.57 years for the Tuvaluan sample, 46.00 years for the Tongan sample, and 32.25 years for the Samoan participants. The numbers of inhabitants of the settlements and their distance to the sea also show some variance due to specific characteristics of the islands that interviewees live on. These islands are Funafuti and Vaitupu in Tuvalu, Upolu in Samoa, and Tongatapu and Lifuka in Tonga. Approximately half of the respondents engage in fishing and farming activities, although fishing is less prevalent in the Samoan sample that partially consists of rather young university students (25 of 60 respondents). One explanation for the relatively high age of the Tuvaluan sample may also reflect the tendency of young adults to migrate from outer islands. Yet, despite the differences in the composition of the samples, the results can be expected to provide an overview of perceptions of environmental change and coping strategies.

During the time of the survey from February 2011 to February 2012, La Niña had a considerable effect on local weather patterns of the selected island states. The impacts were particularly felt in Tuvalu, where the government declared a state of emergency due to severe water shortages in September 2011. For Samoa and Tonga it is noteworthy that several tropical cyclones had hit the region in the recent past and caused destruction, flooding, and erosion due to heavy wind and extreme precipitation so infrastructure as well as plants and plantations were affected.

Table 1: Island and sample characteristics

	Tuvalu	Samoa	Tonga
Island characteristics			
Size	26 km²	2,842 km²	748 km²
Number of inhabitants	10,837 (in 2012)	194,320 (in 2012)	103,036 (in 2011)
Topography	Low-lying and narrow coral atolls	Narrow coastal plains, interior mountains	Coral formation, volcanic
Highest elevation	5 m	1,857 m	1,033 m
Tropical cyclones per decade on average	8	10	17
Sea level rise measured by satellite altimeters since 1993	about 5 mm per year near Tuvalu	about 4 mm per year near Samoa	over 6 mm per year near Tonga
Sample characteristics			
Time of interview	May - June 2011	February 2012	February - March 2011
Island	47 (79.7%) Funafuti 12 (20.3%) Vaitupu	57 (95.0%) Upolu 3 (3.3) Samoa	20 (33.3%) Lifuka 39 (65.0%) Tongatapu
Gender	*Female* 24 (40.7%) *Male* 33 (55.9%) *Missing* 2 (3.4%)	*Female* 36 (60.0%) *Male* 24 (40.0%) *Missing* 0 (0%)	*Female* 41 (68.3%) *Male* 19 (31.7%) *Missing* 0 (0%)
Age (years)	*M* 63.57 *SD* 11.688 *Min* 35 *Max* 86 *Missing* 1	*M* 33.25 *SD* 17.498 *Min* 16 *Max* 84 *Missing* 1	*M* 46.00 *SD* 12.562 *Min* 24 *Max* 72 *Missing* 1
Number of inhabitants of settlements	*M* 660.42 *SD* 441.264 *Min* 8 *Max* 2000 *Missing* 16	*M* 1802.29 *SD* 1608.119 *Min* 10 *Max* 5000 *Missing* 9	*M* 572.50 *SD* 504.867 *Min* 150 *Max* 2000 *Missing* 0
Distance from home to the sea	*M* 112.29 *SD* 175.4 *Min* 10 *Max* 1250 *Missing* 1	*M* 542.34 *SD* 1136.645 *Min* 2 *Max* 7000 *Missing* 13	*M* 19.12 *SD* 16.946 *Min* 0 *Max* 65 *Missing* 1
House and land ownership	*Yes* 45 *No* 12 *Missing* 2	*Yes* 52 *No* 1 *Missing* 7	*Yes* 29 *No* 29 *Missing* 2
Plant for own daily consumption	*Yes* 40 *No* 19 *Missing* 0 *Sell* 7	*Yes* 30 *No* 28 *Missing* 2 *Sell* 12	*Yes* 28 *No* 32 *Missing* 0 *Sell* 3
Fish for own daily consumption	*Yes* 35 *No* 24 *Missing* 0 *Sell* 7	*Yes* 10 *No* 48 *Missing* 2 *Sell* 6	*Yes* 43 *No* 17 *Missing* 0 *Sell* 17

Results

Figure 2 shows a summary of the most frequently mentioned impacts of climate-related environmental change, resultant personal adaptation strategies, as well as expectations that respondents have of local governments and NGOs with regard to their supportive action. These results will be explained in detail in the following sections.

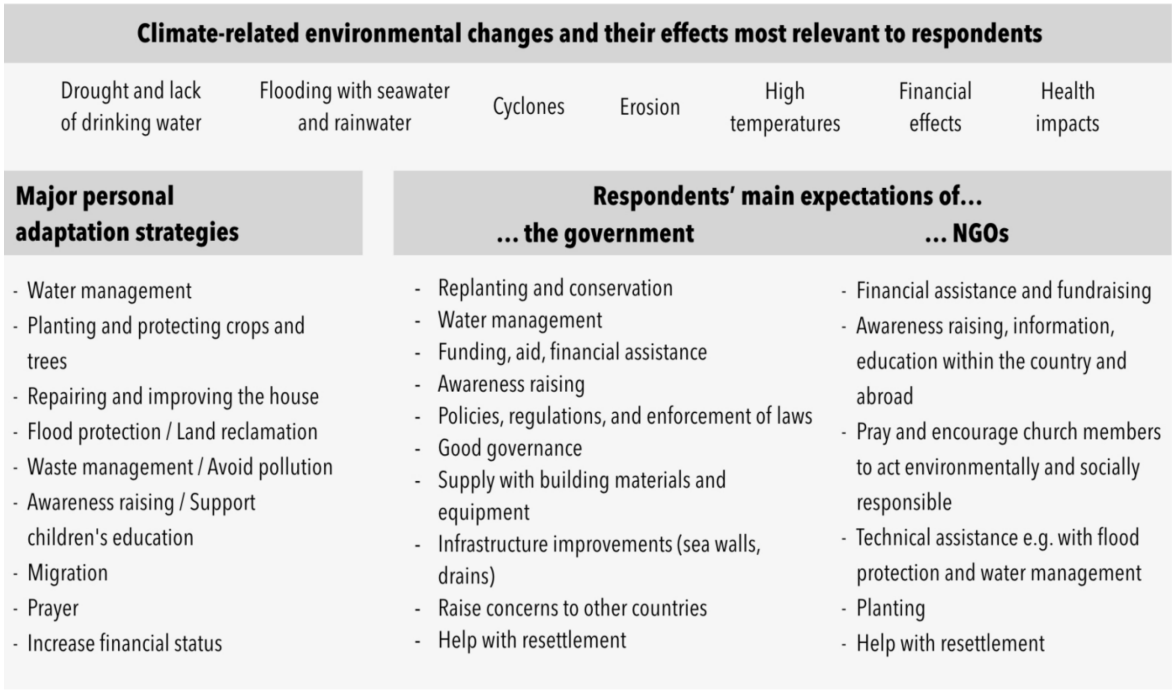

Figure 2: Summary of qualitative results.

Environmental events affecting people's lives most: drought, cyclones, and floods

The analysis of the qualitative and quantitative data shows that the kind of climate-related environmental changes that affect the respondents' lives most, as well as the assessment of the severity of this affectedness vary between and within the three countries (Figure 3 and Table 2). With regard to the quantitative data it is noticeable that the Tongan respondents show a higher level of agreement to many questions compared to participants from Tuvalu and Samoa who follow more central tendencies in their replies. Three factors that stand out as potential explanations for these differences in the answer tendencies between the countries should be kept in mind when interpreting the results below. Firstly, the patterns could be related to differences in the actually observable affectedness, for instance, impacts of extreme events such as heavy tropical cyclones that hit Tonga in the recent past. Secondly, age differences between the samples might have an effect: e.g., the young Samoan sample, that mainly consists of university students, has probably not yet built their own houses, but is likely to do so in the future, and, therefore, also expects to be affected more severely by impacts of environmental change. Thirdly, despite precise instructions that the local research assistants received, interviewer effects cannot be ruled out as impacting the comparability between the three samples since the interviews were done by three local teams. Nevertheless, the results provide an overview of the magnitude of single impacts, both, within but also between the samples.

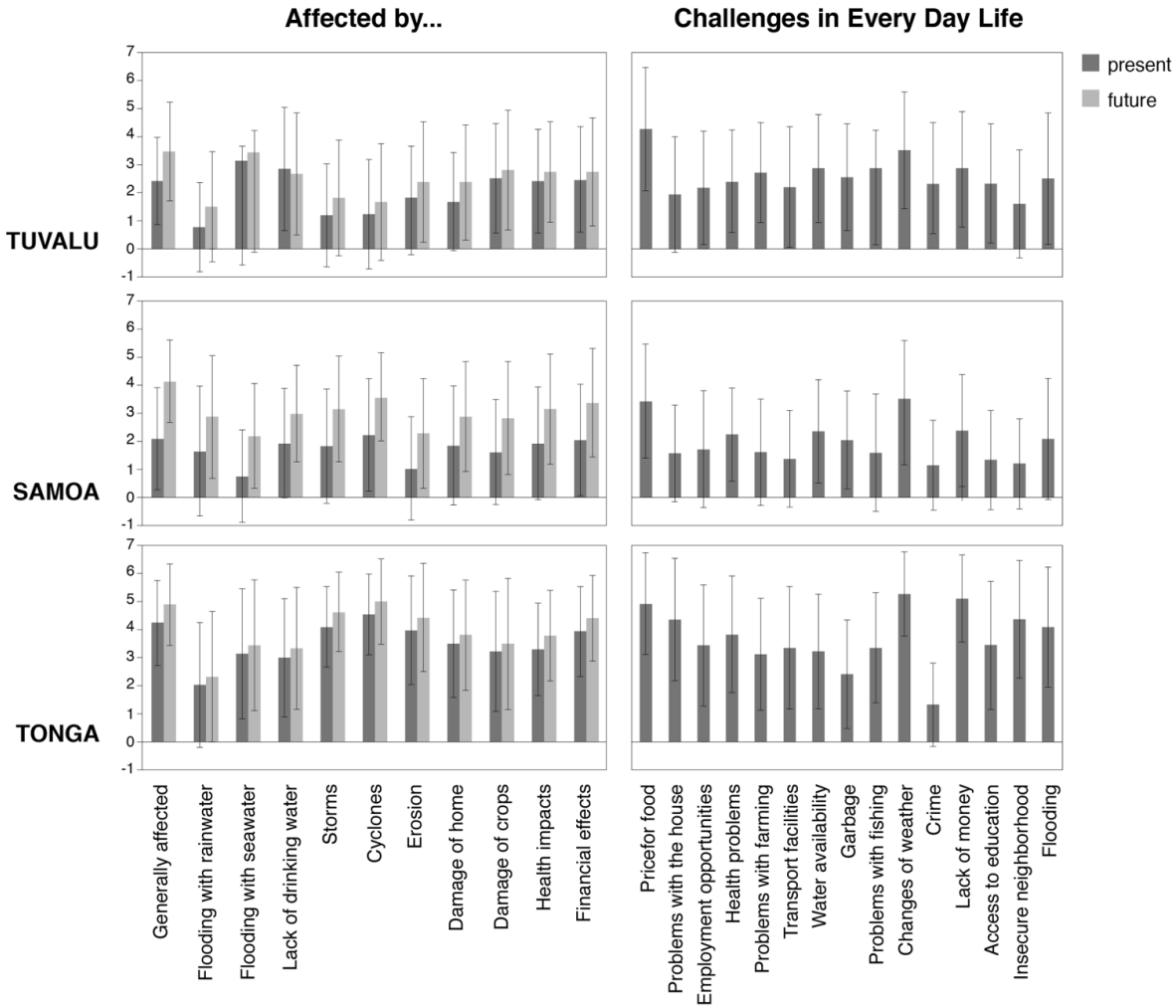

Figure 3: Mean values and standard deviations for present and expected impacts of environmental change and challenges in everyday life.

Table 2: Sample quotes about environmental changes that impact people's lives most.

Environmental changes most affecting people's lives	Quote
Drought/ lack of drinking water	**Tuvaluan male, 64 years old, 5 children**: "I can firmly admit that health impact due to drought, flooding, storms, heat or lack of clean drinking water is the major cause for my daily life - due to the following factors: When it is drought season, there are many kinds of diseases could happened. Beside that plants, animals, soil and human beings suffered seriously because of lack of water to drink, wash the dirts away from eating utensils, clothes etc. Because the soil is always dry, the dust is greatly formed up to spread diseases etc. This nature of disaster affects the lives of all living things on the particular environment. That is why I consider it to be worst of all." **Samoan female, 32 years old, 4 children:** "The lack of drinking water has the greatest influence on my daily life the most because it usually means we have to purchase drinking water from the shops which is very costly. The lack of rainfall causing droughts also influences or affects the way my crops grow and the fruits they bear. The unreliable rainy season doesn't produce enough rain and the dry season is also too hot with soaring temperatures hindering or affecting the produce of my crops. Accordingly because of the bad / poor yields most cannot be sold and that means less income to provide for my family."

Flooding	**Samoan female, 42 years old, 4 children** "Since our home is close to a swampy area, so every year our yard got flooded and after every flood my children get really sick. And mosquitoes population increase." **Samoan male, 29 years old, no children:** "When rivers and creeks overflow it floods my family's plantation and damages crops which my family relies on as a source of income. **Samoa male, 30 years old, 3 children**: "Sea level rise - my family depends heavily on the sea for food and little income. The coastal erosion and sea water flooding has been affecting our home gardening (salinity). Food security is now an issue for me and my family."
Cyclones	**Tongan female, 63 years old, 2 children**: "Cyclones influence my daily life the most. It damage my house, crops, my grandchild afraid of strong winds, thunderstorm and lights. During cyclone it brings strong heavy rain which cause leaking into my house. We move to another house for retreat because the stronger the winds blow the housing getting move around. King tides wash out most our land even our piggery are affected by erosion of land. Loss of our coastal trees, bananas and other trees damaging by cyclone. After cyclone lack of food available for my family, more work to do such clean up all broken glasses, rubbish, put everything in order etc." **Tongan female, 48 years old, 1 child**: "Damage of the house due to storms. This is the worsiest environmental change that influence my daily life most. It brings heavy rain, strong winds and the water comes inside our house because our house is very old. The wood are rotten easily water comes in, leaking occurs due to combination of rain water and sea water cause rotten in the iron of the roof. It also wash off our land, damage our fruits, trees at home. My family health too threaten due to this environmental change."
Erosion	**Tongan female, 33 years old, 4 children:** "Erosion - The sea takes away my land and threatens my house and plants. This environmental event affected me and my family the most. Most of my land has been taken by the sea water, half of my house covered by the sea, plants were plant beside our house has been wash out into the sea. This is due to Erosion happens from high sea level, storms, cyclones, heavy rains and all the other environmental changes that threatens myself and my family. This is really shows the influence of environmental event on us human being. Lastly, our house, our land is on the sea brings the idea for me to say that erosion and their effects influence my daily life the most." **Tongan female, 33 years old, 1 child:** "As we are staying very close to the beach and in a low lying areas big waves from the sea wash off most of my land, damaging my house especially when rough seas during cyclone and strong winds. The sea water reach our house when cyclone comes and the sand covered our land. Even our tank of water the sea water moves it from its location to another. My garden at home are getting loss due to much erosion happening from the seawater."
Financial effects	**Tongan female, 49 years old, 6 children:** "Financial effects due to environmental events. From all my daily activities they are all close in touch with nature. When the environmental changes occurs it affects my daily life mostly financial effects. Changes of the environment sometime makes me sick and I can't go to work and do weaving at home. This cause less income earn by the family. When it heavy rains, strong winds I can't go fishing or cutting pandanus for weaving. This leads to financial effects because if I can't go fishing we won't get food also takes long to get money from weaving because the process of making pandanuns will be depend from the weather. Long rain damage the pandanus sometime not worth for weaving leads to financial effects."

The majority of the Tuvaluan participants named drought when they were asked what environmental change affects their daily life most. The lack of rainfall and limited water storage capacity led to scarcity of drinking water on the coral atoll, in particular in the year of the survey. Although the respondents also described effects of storms, flooding, erosion, and high temperatures, the main focus of the answers to the open question was on drought-related problems. These statements are also supported by the quantitative data.

Samoan participants emphasized impacts of drought, lack of drinking water, and water pollution on plants and human health when asked about environmental changes that affect their lives most. Also, high temperatures and flooding caused by rainwater and seawater were often mentioned as pressing issues. Compared to the Tuvaluan and Tongan samples, the rather young Samoan participants mentioned financial impacts of environmental effects in their replies to the open question more often than damages of houses.

Tongan respondents described a multitude of environmental changes that severely affect houses, plantations, and human health. These include cyclones, heavy rainfall, flooding with rainwater and seawater, soil erosion, lack of drinking water, as well as high temperatures. Combined with material damage and health impacts, financial burdens were highlighted. The quantitative rating shows, for instance, that the majority of the Tongan participants has been affected severely by cyclones (56.7%) and erosion (51.7%). For the future, the participants from all three countries expect to be affected even more severely by the impacts of environmental change.

Most prominent adaptation strategies on household level

Despite the diversity of individual coping strategies that the respondents described, it was possible to identify ten main categories. The most prominent strategies that participants from all three countries have already taken to address impacts of environmental change on their lives are related to water management and the planting of crops and trees. Among other frequently mentioned measures were house repairs, flood protection, waste management and awareness raising. Less frequently named options are migration and prayer.

1) Water management. Water management includes the building of new water tanks and cisterns, digging wells, water budgeting, boiling water, or resorting to bottled water. However, tanks were described as expensive and difficult to afford.

2) Planting. Planting crops and trees was depicted as an option to reduce erosion, as windbreakers, and to ensure food security. In this context, preparing the land and improving gardening techniques were also mentioned. In addition to planting new trees and plants, respondents highlighted several times that it would be important to stop cutting trees.

3) Repairing the house. Repairing and preparing the house to withstand cyclones, heavy rain, and flooding was another frequent coping strategy. These repairs and preparations include putting galvanized iron around the windows and doors to avoid water leakage, repair rotten wood, raise the house to avoid flooding impacts, or putting cement underneath the house. Samoan respondents also mentioned that it would be helpful to build traditional Samoan houses. These 'fales' are houses built of natural materials where wooden posts hold a doomed roof made of dry leaves, and instead of solid walls, woven mats are used as drop-down blinds. Having evolved in their shape and structure over generations, these traditional houses are well adapted to the local climate, and the use of locally available materials makes rebuilding theoretically easier than purchasing imported materials. However, user expectations and needs in the 21st century are not always met by these traditional homes, making other structures often more desirable.

4) Flood protection. Raising and protecting the house are further practical preparations that were mentioned by many participants. Here, collecting rocks to put around the house, filling the area with additional soil, and by doing this, reclaiming land were frequently brought up as strategies to reduce flooding from heavy rain and land erosion. However, soil is rare,

especially on coral atolls, and it is often a challenge getting materials. Sand and coral mining are counterproductive options, and several respondents said that this practice should be stopped. Alternatively, some participants resort to collecting rubbish to raise the land, e.g.: "Put all our rubbish beside our house face the sea to stop damaging cause by waves such as soil erosion, damage my house" (Tongan man, 49 years old, 6 children). Again, it is questionable, if this is the most sustainable option or if it would further advance pollution-related problems. In addition to such personal adaptation measures, several respondents mentioned that they contributed to the construction of a community sea wall to withstand high waves. As prevention to rainwater flooding, two Samoan individuals suggested digging proper drains.

5) Waste management. Another common measure that was highlighted more frequently by Samoan individuals than by Tongan and Tuvaluan participants is waste management. Answers included mainly a halt to the burning of rubbish, pollution, and littering. Instead, it was suggested to initiate clean ups. However, it is unclear to what extent these behaviors are actually realized, especially when there are insufficient waste management alternatives.

6) Reduce burning of fossil fuels. Although technically a mitigation strategy rather than an adaptation strategy, an option that was raised mainly by the Samoan participants was the reduction of fossil fuel use, for example, by driving less with private cars, but using the bus instead, or walking. Yet, since no direct behavior was measured in this study, it would be worthwhile to see if the survey participants mentioned mainly possible ideas and good intentions, or actually act accordingly.

7) Raising awareness. A more indirect strategy to cope with environmental change that was brought up frequently is raising awareness. Respondents from all three countries said that awareness-raising would be important within the families and communities, but also via the media, at school, at church, and in workshops.

8) Saving and earning money. In particular Tongan participants said they would try to save and earn money for food, education, family functions, church, and for times when problems occur. Only one person mentioned explicitly insuring the house.

9) Migration. Although considerable media attention has been paid to migration to other countries as an option to adapt to climate change in small island states, it seems surprising that this strategy is rarely represented in the replies to the open questions. Indeed, relocation and migration were mentioned in all three countries as an answer to the open question of how people already adapt, yet mostly in the context of moving inland and seeking shelter (from cyclones) elsewhere. Only one individual from Tuvalu (female, 80 years old) explicitly mentioned "evacuation to other countries." Generally, the concepts of migration, relocation and evacuation were used interchangeably by the respondents and only when considering the further context of the replies could a distinction be made between inland relocation and migration to other countries.

10) Prayer. More often than naming retreat as an option of adaptation, participants from Tonga and Tuvalu mentioned fasting and praying to God for help as strategies to cope with environmental change. In the Samoan sample, prayer did not occur in the replies to the open question about what people already do to address environmental change.

Distinctions between country-specific adaptation strategies

Most of the aforementioned adaptation strategies on the household level as well as their expectations of the government and NGOs were similar across the three samples. Overall, the respondents' expectations of the government focus mainly on funding, policies, and awareness raising within the countries and abroad. In terms of practical support, people hope for assistance with water management, protective measures to reduce erosion, and improvements to infrastructure and income opportunities. The role of NGOs is mainly seen in providing financial assistance, awareness raising within the communities and abroad, as well as spiritual guidance and practical support to address environmental and infrastructural problems. Thereby, they are

seen as supporting the government in practical terms, but also helping with encouragement, spiritual care, and advice. As shown below, there were several specific differences between the three samples not only with regard to coping measures on a household level but also concerning the expectations that citizens have of the government and NGOs.

Tuvalu: coping with drought

In Tuvalu, the most important adaptive action is clearly seen in the improvement of water management. Regarding household-based adaptive action, the greatest emphasis is placed on expanding water storage capacity and water conservation. The main role of the government and NGOs is seen in funding and providing water storage facilities. Many agencies also responded to this immediate need.

Apart from that, other strategies that were mentioned frequently on household level involve planting crops and plants, repairing, improving, and raising the house, as well as reclaiming land. More general strategies include awareness raising, general protection and self-assistance, increasing one's own financial status, and supporting children's education. Interestingly, migration was only mentioned once in the current adaptation strategies, although it occurred three times in the future plans. The introduction of new technologies, building of sea walls, and prayer are measures that were less prominent.

The Tuvaluan respondents' expectations of the government and NGOs that go beyond water management were related to funding, aid, and financial assistance. The most relevant examples of specific measures for which funding was needed are water tanks, materials for houses and gardens, a sea wall, and the easing of soil erosion. Furthermore, people wished for more awareness raising and sharing of information on the importance of soil, the protection of plants, home gardening, and water management. Apart from raising awareness within the country, it was suggested that it was important to raise the country's concerns to the United Nations and big countries to seek external assistance in order to reduce global greenhouse gas emissions and help small countries address the impacts of climate change. Moreover, specific expectations towards NGOs include finding a safe place to live and helping with evacuation.

Samoa: planting, education, regulation

Regarding their adaptation strategies, Samoan participants mainly expressed that they plan to plant and preserve plants. Apart from that, replies were rather diverse, with no clear key focus areas. Interestingly, having no specific adaptation plans for the future was the second-most frequent category. Moving inland followed at number three, followed by avoiding pollution, organizing an additional water tank, earning money, and raising the land. Other options, such as awareness raising, changing fishing practices, stopping the cutting of trees, building traditional houses, and building a sea wall were only mentioned once or twice each.

The Samoans' expectations of the government and NGOs were rather diverse as well. Most emphasis was placed on education and raising awareness about environmental and climate change, how to prevent it, and how to address its impacts.

A specific expectation of the government concerned policies and regulations, the enforcement of laws, and penalties for those who break them. For instance, a 47-year-old Samoan man said that "The government should enforce strict policies in prohibiting people from cutting down trees, dumping of toxic waste in the sea, using dynamite to catch fish and general use of chemicals that can harm the environment."

The second-most frequent category of expectations that the respondents have of NGOs referred to the role of the church. "The church especially should be one of the leading institutions to address problems. This is because almost every Samoan attends a particular church, and it would be easier when having this issue integrated in church matters like from a Christian perspective" (Samoan man, 18 years). Respondents also said that the "Church should always pray to God for mercy and protection over our people" (Samoan man, 84

years) and that the church "must give Godly direction" (Samoan woman, 79). Others emphasized that the church "should include environmental issues in their weekly discussion" (Samoan woman, 18 years). One individual mentioned specifically that "the church should provide psychological assistance to people during hard times" (Samoan woman, 32 years).

Other less prominent expectations of the government and NGOs concern water management, replanting, building sea walls, and constructing proper drains to avoid flooding. Suggestions referring to environmental protection include marine reserve programs, stopping of sand mining, environmental impact assessments, and the reduction of greenhouse gases. Moreover, the provision of assistance for farmers and poor people, free medicine for poor families, improved health centers, public transportation, and infrastructure were also named occasionally and illustrate the breadth of issues that cannot all be described in detail here. Appropriate zoning for land use and limiting unwanted ships are just two more examples that might be specific to a Pacific island environment.

Tonga: struggling with cyclones, flooding, and erosion

The adaptation strategy that two-thirds of the Tongan respondents named for addressing the impacts of environmental change is planting trees and growing crops. Planting serves multiple purposes, including reducing erosion, earning money, and ensuring food security. However, Tongan participants explained that planting is difficult because they lack the soil and the money to realize their plans.

Ranked number two among personal adaptation strategies is earning and saving money. In third place, one- third of the Tongan sample listed planning to relocate or evacuate either within the country or overseas and trying to find land to live on. Further strategies include raising awareness and education for children. More specific plans refer to renovating and repairing the house and raising, reclaiming, and protecting the land using walls and a 'floorshore' (probably meaning a foreshore). Building a sea wall was suggested several times, as was waste management, the wise use of resources, water management, and working together on environmental programs as a community. Prayer was mentioned only once in connection with future plans.

Asked for their expectations as to how the government can assist in coping with the perceived environmental challenges, the Tongan respondents wished that officials would support the replanting of coastal plants, set up a nursery, and supply plants to people in order to prevent erosion and deforestation. In second place was a general plea for help, good governance, equal distribution of resources, and the wish that the government should work together with the people and local communities. In addition, and more specifically, participants asked for financial support for a sea wall, soil, building materials, fishing equipment, food, and clothes, particularly for people who are severely affected by cyclones and other impacts of environmental change and natural hazards.

A category that was specific to the Tongan sample is the provision, division, and registration of land. This is probably due to the fact that all land in the kingdom is the property of the crown, and as a result, some nobles control land leases while many other people lack land (Moala, 2014). Another typical Tongan reply was that the government should provide trucks with soil or rocks to support land reclamation. Similar to the responses of the Tuvaluans and Samoans, other expectations include renovating a sea wall, improving waste management, supplying electricity, updating and enforcing laws, and awareness raising and education with the help of schools, workshops, and the media.

The role of NGOs is seen as seeking funding for environmental programs in local communities; building sea walls; supporting water and waste management; helping with replanting and repairs; improving the standard of living; and providing soil, building materials, equipment for farming and fishing, food, and clothes. As in the Samoan sample, the role of the church was highlighted and presented the category with the second-most frequent replies

for the expectations that Tongans have of NGOs. The church should pray for the people, encourage church members to grow crops, and assist those who are affected by environmental change in rebuilding houses and funding.

In general, NGOs should work together with the government in trying to protect the environment and ensure the fair distribution of aid and resources. As in the Tuvaluan sample, several individuals from the Tongan group mentioned that NGOs should help to address the problem worldwide, visit the villages, provide footage on the effects of environmental change, inform the world, and encourage developed countries to reduce pollution.

Perceptions of responsibilities, self-efficacy, and personal opportunities

In addition to the information about the kinds of environmental change that people perceive, their individual adaptation strategies, and their expectations of other actors, several questions based on Grothmann's (2005) theory and surveys were used to gauge and compare opinions about the distribution of responsibilities, self-efficacy beliefs, as well as personal opportunities to adapt.

1) Personal responsibility. The majority of the Samoan sample (55%) agrees strongly with the statement that "Every citizen is himself/herself responsible for preventing damages due to environmental change in his/her private household." Of the Tongan sample, 40% agree strongly, and within the Tuvaluan sample there is strong agreement among 27.1%. Only few individuals completely disagree. The majority of the Tuvaluan participants (52.2%) and 43.3% of the Tongan respondents show medium agreement. However, as there was no 'don't know' option for the answer scales of the agreement questions, medium agreement could also be interpreted as indecisiveness here. Yet, upon closer inspection and particularly in consideration of the Pacific community spirit, this item is probably culturally inappropriate and should be complemented by questions regarding the community's responsibility.

2) Reliance on public adaptation. More than half of the Tongan participants strongly agreed that the government (1) would supply them with all necessities (56.7%), (2) would ensure that impacts of environmental change would not affect them (60%), and (3) would ensure that necessary structures exist to protect people from environmental change (73.3%). Samoan respondents seem to see this differently, with only 10% agreeing with the first two statements and 25% with the latter. The vast majority of the Samoan sample showed medium or no agreement. The opinion of the Tuvaluan participants is in between, with 50.8% agreeing strongly that the government would ensure that necessary structures exist to protect the people; however, the other two statements mainly received medium agreement. Although these statements are rather general and might partly measure people's attitude towards and trust in the ability of a government, they give an initial impression of the distribution of perceived responsibilities.

Although seemingly distinct constructs, the perception of personal responsibility and the expectation of governmental protective actions do not exclude each other. Thirteen percent of the participants from Tuvalu, for instance, said that every citizen is responsible for preventing damage to private property, and they also agree strongly that the government would supply them with necessities for living that they might lose due to impacts of environmental change. Between these two items, we also found a significant positive correlation of Spearman Rho = .374; p =.005; N= 54. Similarly, 10.7% of the Samoan respondents acknowledge personal responsibility and expect the government to ensure that the necessary structures exist to protect people from the impacts of environmental change. The correlation between these two items is also significantly positive (Rho = .319; p =.016; N= 56).

3) Self-efficacy vs. fatalism. The items for self-efficacy received little agreement. Most people were undecided or disagreed that they could cope effectively with the impacts of the perceived environmental change or could avoid damage with the measures they mentioned.

These results match the statements of 36.7% of the Tongan group, who agreed strongly that they are quite helpless with regard to avoiding impacts of environmental change on their lives. 27.1% of the Tuvaluan sample and 56.7% of the Samoan participants do not agree or show very little agreement here. Again, perceived self-efficacy and fatalism (helplessness) are not as independent of one another as they might seem, and several significant positive correlations could be found between the respective items in particular in the Tuvaluan and Tongan sample. For example, Tuvaluan and Tongan respondents who said that they could cope effectively with the impacts of environmental change (SE1) also often said they were quite helpless (F1; correlations between SE1 and F1 for Tuvalu: Rho =.450; p =.001; N= 53; for Tonga: Rho =.349; p =.007; N= 58). Similarly, those who said that they could cope effectively also said that they could not do much to avoid damage due to environmental change (F2; correlations between SE1 and F2 for Tuvalu: Rho =.568; p =.000; N= 53; for Tonga: Rho =.356; p =.005; N= 60).

4) Personal opportunities. Five questions aimed at investigating how people assess their opportunities and resources to realize adaptation strategies. Although few respondents disagreed with the idea that they did not know how to deal with the impact of environmental change on their houses, crops, and their lives, only very few people agreed that they had the necessary skills. This suggests that although participants might have a fair idea of what could be done, they feel they lack the skills to realize effective adaptation strategies. 43.3 % of the Tongan sample agreed strongly that they lacked the money to change anything and also said that they had more important things to worry about. However, more Tuvaluan and Samoan participants disagree (no money: 20.3% and 31.7%; other things to do: 25.4% and 56.7%) than agree (no money: 16.9% and 21.7%; other things to do: 18.6% and 6.7%) with these statements. Interestingly, hardly any participants in all three countries agreed that there was no time to address the changes, although this might be a frequent reply in Western contexts.

Discussion and conclusions

This survey study set out to investigate how residents of three Pacific small island states perceive their being affected by climate-related environmental change. On the one hand, it explored the kinds of adaptation strategies people devise and implement, while on the other hand it analyzed expectations people have of governments and NGOs when it comes to addressing such changes and resultant impacts. Five key points can be summarized:

1) The main challenges that the respondents perceive as affecting their lives are drought, cyclones, flooding, erosion, and associated impacts on health, property, and finances.
2) Current personal coping strategies mainly involve water management, planting, repairing and preparing the house and private property, waste management, and improving one's own financial situation.
3) Future plans for personal adaptation are similar to current strategies, although in addition, moving inland and finding land to resettle on are important particularly to respondents from Tonga and Samoa who suffer from flooding and erosion.
4) People's expectations of the government and NGOs relate predominantly to funding, technical assistance, supply of materials, the provision of land, raising awareness, the enforcement of policies, and the provision of spiritual and practical support.
5) Perceptions of shared responsibilities, self-efficacy, and helplessness can coexist and are not necessarily independent of one another. The perception of personal opportunities to adapt is dominated by a perceived lack of skills and money.

Methodically, the mix of open and closed questions was generally a suitable way to gauge perceptions of local respondents. However, the questions that have been translated from Grothmann's work and ask about self-responsibility, self-efficacy, reliance on public adaptation, and helplessness do not seem optimal for the Pacific context. As those questions

were rather general and unspecific, thinking regarding different adaptation strategies and scales of damage while answering could bias the replies. Therefore, more open questions or more specific closed questions that relate to single adaptation strategies would have been helpful here.

A second important point arising from these methodological considerations is that, in addition to the concepts of personal responsibility and self-efficacy, it would be advisable to include items that take into account the strong social cohesion that shapes Pacific cultures. Being based on reciprocity, the Pacific 'sharing and caring' system is an essential part of daily life and regularly gets reinforced in traditional ceremonies and celebrations. Hence, research about adaptation to climate-related environmental change as well as specific adaptation projects need to consider community norms, decisions, actions, support, and sanctions that might affect individual behaviour. Social identity and collective efficacy are also increasingly highlighted as powerful motivators for sustainability behaviour in Western contexts (Fritsche, 2017; Jugert et al., 2016; Barth et al., 2016). Including such concepts more explicitly in future research in the Pacific region as well as worldwide could therefore contribute to a better understanding of individual behavior.

Overall, the findings of the current study exemplify impacts of climate-related environmental change among a diverse set of challenges that people in Pacific small island states are confronted with (Barnett & Campbell, 2010; Fazey et al., 2011; McCubbin et al., 2015). We could also confirm that people in Pacific small island states perceive environmental change as a result of unsustainable lifestyles, and they are aware of unsustainable practices, such as sand mining, blast fishing, logging, burning rubbish, and use of fossil fuels (Aswani et al., 2015; Lata & Nunn, 2013; Ford, 2012). This also relates to Campbell's (2009) view that the vulnerability connected to 'islandness' arises from the interplay of many factors that are associated with modernity. Adaptation to prevailing challenges should therefore be integrated into broader sustainable development, and people's perceptions of unsustainable practices could be used as a basis to jointly develop alternatives.

In line with previous research, the results of the current study support that people are aware of diverse strategies to cope with environmental change and resultant impacts (e.g. McCubbin, 2015; Aswani et al., 2015; Magee, 2016). However, perceptions of low self-efficacy and lack of personal skills to cope effectively with the multitude of challenges prevail. In addition, respondents report a lack of money, materials, soil, and available land. These factors impede water management, preparing and repairing houses and property, planting, and retreat. Another prominent strategy, namely improving one's own financial situation, is also difficult to realize due to limited income-generating opportunities that often also place additional stress on local ecosystems (Aswani et al., 2015). Moreover, waste management and reducing the burning of rubbish depend on communal infrastructures and are not completely in the hands of local people. Hence, being confronted with such difficulties, respondents refer to their trust in God when it comes to coping with environmental stresses (Montreux & Barnett, 2009; Kuruppu & Liverman, 2012; Nunn et al., 2016). And although it is criticized that long-term planning often falls short in island contexts (Lata & Nunn, 2012; Nunn, 2013), this phenomenon is understandable due to the constant necessity to adapt to immediate pressures.

In general, people adapt to what they directly experience or have experienced earlier and prepare for what they see as likely to come in their immediate future. In order to enhance adaptive behavior and improve coping capacity, a holistic communicative approach needs to relate 1) to perceptions and future expectations of change, and 2) to the perceived efficiency of adaptive strategies (Grothmann & Patt, 2005; Moser, 2014; Beyerl et al., 2016). Integrated into local customs, communicative approaches should not only raise awareness about climate change *per se* but also focus on various types of effective and feasible coping strategies, training of necessary skills, assistance in obtaining essential items and materials, and support for self-efficacy (Moser, 2014; McNaught et al., 2014; Scott-Parker et al., 2016; Rudiak-Gould, 2014; Nunn, 2009; van Aalst, 2008; Mercer, 2010; Gero et al., 2011; Mercer et al. 2012).

Although barriers to adaptation exist, most of them are not impossible to overcome with joint action and commitment (Moser & Ekstrom, 2010; Biesbroek et al., 2013; Betzold, 2015).

Despite acknowledging their personal responsibility, many of the respondents in the present study see their governments as responsible for protective action, and considerable hope is also being placed in the work of NGOs (Barnett, 2008; Nunn, 2009; Barnett & Campbell, 2010; Kuruppu & Willie, 2015; McCubbin, 2015). In general, it is necessary that a shared understanding of the distribution of responsibilities for adaptive action is developed (Moser, 2014; Moser & Ekstrom, 2010). In addition to communicating what kind of support governments and NGOs can realistically contribute, it would be important to test and communicate the most effective coping strategies that these institutions could foster as well as why they do not support certain other measures. For example, many respondents expect the government and NGOs to support the construction of seawalls. However, seawalls are often ineffective in reducing shoreline erosion, they mostly shift the problem and sometimes even increase it, especially when they are not professionally built or when maintenance funding runs out (Kumar, 2007; Nunn, 2009; Ford, 2012; Yamamoto & Esteban, 2013; Duvat, 2013; Hills et al., 2013; Betzold, 2015). Such differences in perceptions, expectations, and actual efficiency need to be addressed to reach truly sustainable adaptation and development (Moser, 2014; Aswani et al., 2015; Beyerl et al., 2016). Determining the most effective strategies that do not aggravate other problems with their side-effects is crucial here. The current paper provides an overview of coping strategies that people reported, and an important next step would be to evaluate the efficiency of these strategies and, if necessary, work on sustainable alternatives.

In order to adapt to current needs and to prepare for a resilient future, sustainable options that help meet demands for energy, water, food, sanitation, waste management, transportation, construction materials, and consumer products are crucial and should receive increasing attention. People arrange their daily lives given the circumstances with which they are confronted and choose the behavioral options that they find most attractive. Sustainable behavioral options should therefore be made available and easy to realize.

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References

Aswani, S., Vaccaro, I., Abernethy, K., Albert, S., & de Pablo, J.F. (2015). Can perceptions of environmental and climate change in island communities assist in adaptation planning locally? *Environmental Management*, 56(6), 1487-501. https://doi.org/10.1007/s00267-015-0572-3

Australian Bureau of Meteorology and CSIRO (2014). *Climate variability, extremes and change in the western tropical Pacific: new science and updated country reports. Pacific-Australia Climate Change Science and Adaptation Planning Program Technical Report*. Melbourne: Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation.

Barnett, J. (2008). The effect of aid on capacity to adapt to climate change: insights from Niue. *Political Science*, 60, 31-45. https://doi.org/10.1177/003231870806000104

Barnett, J., & Campbell, J. (2010). *Climate change and small island states: power, knowledge and the South Pacific*. London: Earthscan.

Barnett, J., & O'Neill, S. J. (2012). Islands, resettlement and adaptation. *Nature Climate Change*, 2, 8-10. https://doi.org/10.1038/nclimate1334

Barnett, J., & Waters, E. (2016). Rethinking the vulnerability of small island states: climate change and development in the Pacific islands. In J. Grugel & D. Hammett (Eds.) *The Palgrave Handbook of International Development* (pp. 731-748). Dodrecht: Springer.

Barth, M., Jugert, P., & Fritsche, I., (2016). Still underdetected: social norms and collective efficacy predict the acceptance of electric vehicles in Germany. *Transportation Research Part F: Traffic Psychology and Behaviour*, 37, 64-77. https://doi.org/10.1016/j.trf.2015.11.011

Betzold, C. (2015). Adapting to climate change in small island developing states. *Climatic Change*, 133(3), 481-489. https://doi.org/10.1007/s10584-015-1408-0

Beyerl, K., Putz, O., & Breckwoldt, A. (2016). The role of perceptions in community-based marine resource management. *Frontiers in Marine Science*, 3:238. https://doi.org/10.3389/fmars.2016.00238

Biesbroek, G.R., Klostermann, J.E.M., Termeer, C.J.A.M., et al. (2013). On the nature of barriers to climate change adaptation. *Regional Environmental Change*, 13(5), 1119-1129. https://doi.org/10.1007/s10113-013-0421-y

Burson, B. (Ed.) (2010). *Climate change and migration: South Pacific perspectives*. Wellington: Institute of Policy Studies, School of Government, Victoria University of Wellington.

Campbell, J. (2009). Islandness: vulnerability and resilience in Oceania. *Shima*, 3(1), 85-97.

Campbell, J.R. (2015). Development, global change and traditional food security in Pacific Island countries. *Regional Environmental Change*, 15, 1313-1324. https://doi.org/10.1007/s10113-014-0697-6

Campbell, J., & Warrick, O. (2014). *Climate change and migration issues in the Pacific*. Fiji: United Nations Economic and Social Commission for Asia and the Pacific.

Connell, J. (2016). Last days in the Carteret Islands? Climate change, livelihoods and migration on coral atolls. *Asia Pacific Viewpoint*, 57(1), 3-15. https://doi.org/10.1111/apv.12118

Donner, S.D. (2015). The legacy of migration in response to climate stress: learning from the Gilbertese resettlement in the Solomon Islands. *Natural Resources Forum*, 39, 191-201. https://doi.org/10.1111/1477-8947.12082

Duvat, V. (2013). Coastal protection structures in Tarawa Atoll, Republic of Kiribati. *Sustainability Science*, 8, 363-379. https://doi.org/10.1007/s11625-013-0205-9

Fakhruddin, S.H.M., Babel, M.S., & Kawasaki, A. (2015). Assessing the vulnerability of infrastructure to climate change on the Islands of Samoa. *Natural Hazards and Earth System Sciences*, 15, 1343-1356. https://doi.org/10.5194/nhess-15-1343-2015

Farbotko, C. (2005). Tuvalu and climate change: constructions of environmental displacement in the Sydney Morning Herald. *Geografiska Annaler B*, 87(4), 279-293. https://doi.org/10.1111/j.0435-3684.2005.00199.x

Farbotko, C. (2010). Wishful sinking: disappearing islands, climate refugees and cosmopolitan experimentation. *Asia Pacific Viewpoint*, 51(1), 47-60. https://doi.org/10.1111/j.1467-8373.2010.001413.x

Farbotko, C., & Lazrus, H. (2012). The first climate refugees? Contesting global narratives of climate change in Tuvalu. *Global Environmental Change*, 22, 382-390. https://doi.org/10.1016/j.gloenvcha.2011.11.014

Fazey, I., Pettorelli, N., Kenter, J., Wagatora, D., & Schuett, D. (2011). Maladaptive trajectories of change in Makira, Solomon Islands. *Global Environmental Change*, 21, 1275-89. https://doi.org/10.1016/j.gloenvcha.2011.07.006

Ford, M. (2012). Shoreline changes on an urban atoll in the central Pacific Ocean: Majuro Atoll, Marshall Islands. *Journal of Coastal Research*, 28(1), 11-22. https://doi.org/10.2112/JCOASTRES-D-11-00008.1

Fritsche, I. (2017). 'We' turn(s) the tide!: towards a social identity approach on environmental crises. In A.K. Römpke, G. Reese, I. Fritsche, N. Wiersbinski, & A.W. Mues (Eds.) *Outlooks on applying environmental psychology research* (pp. 57-62). Bonn: Bundesamt für Naturschutz.

Gero, A., Méheux, K., & Dominey-Howes, D. (2011). Integrating community based disaster risk reduction and climate change adaptation: examples from the Pacific. *Natural Hazards and Earth System Sciences*, 11, 101-113. https://doi.org/10.5194/nhess-11-101-2011

Grasso, M., Moneo, M., & Arena, M. (2014). Assessing social vulnerability to climate change in Samoa. *Regional Environmental Change*, 14, 1329-1341. https://doi.org/10.1007/s10113-013-0570-z

Grothmann, T. (2005). *Klimawandel, Wetterextreme und private Schadensprävention. Entwicklung, Überprüfung und praktische Anwendbarkeit der Theorie privater Wetterextrem-Vorsorge*. Dissertation. http://diglib.uni-magdeburg.de/Dissertationen/2005/torgrothmann.pdf

Grothmann, T., & Patt, A. (2005). Adaptive capacity and human cognition: the process of individual adaptation to climate change. *Global Environmental Change*, 15, 199-213. https://doi.org/10.1016/j.gloenvcha.2005.01.002

Grothmann, T., & Reusswig, F. (2006). People at risk of flooding: why some residents take precautionary action while others do not. *Natural Hazards*, 38, 101-120. https://doi.org/10.1007/s11069-005-8604-6

Hay, J.E., (2013). Small island developing states: coastal systems, global change and sustainability. *Sustainability Science*, 8, 309-326. https://doi.org/10.1007/s11625-013-0214-8

Hills, T., Carruthers, T.J.B., Chape, S., & Donohoe, P. (2013). A social and ecological imperative for ecosystem-based adaptation to climate change in the Pacific Islands. *Sustainability Science*, 8, 455-467. https://doi.org/10.1007/s11625-013-0217-5

Jugert, P., Greenaway, K.H., Barth, M., Büchner, R., Eisentraut, S., & Fritsche, I. (2016). Collective efficacy increases pro-environmental intentions through increasing self-efficacy. *Journal of Environmental Psychology*, 48, 12-23. https://doi.org/10.1016/j.jenvp.2016.08.003

Kelmann, I. (2010). Hearing local voices from Small Island Developing States for climate change. *Local Environment*, 15(7), 605-619. https://doi.org/10.1080/13549839.2010.498812

Kelman, I., & West, J.J. (2009). Climate change and small island developing states: a critical review. *Ecological and Environmental Anthropology*, 5, 1-16.

Kumar, L., & Taylor, S. (2015). Exposure of coastal built assets in the South Pacific to climate risks. *Nature Climate Change*, 5, 988-991. https://doi.org/10.1038/nclimate2702

Kuruppu, N. (2009). Adapting water resources to climate change in Kiribati: the importance of cultural values and meanings. *Environmental Science & Policy*, 12(7), 799-809. https://doi.org/10.1016/j.envsci.2009.07.005

Kuruppu, N., & Liverman, D. (2011). Mental preparation for climate adaptation: the role of cognition and culture in enhancing adaptive capacity of water management in Kiribati. *Global Environmental Change*, 21(2), 657-669. https://doi.org/10.1016/j.gloenvcha.2010.12.002

Kuruppu, N., & Willie, R. (2014). Barriers to reducing climate enhanced disaster risks in Least Developed Country-small islands through anticipatory adaptation. *Weather Climate Extremes*, 7, 72-83. https://doi.org/10.1016/j.wace.2014.06.001

Lata, S., & Nunn, P. (2012). Misperceptions of climate-change risk as barriers to climate-change adaptation: a case study from the Rewa Delta, Fiji. *Climatic Change*, 110(1-2), 169-186. https://doi.org/10.1007/s10584-011-0062-4

Lazrus, H. (2012). Sea change: island communities and climate change. *Annual Review of Anthropology*, 41, 285-301. https://doi.org/10.1146/annurev-anthro-092611-145730

Lebel, L. (2013). Local knowledge and adaptation to climate change in natural resource-based societies of the Asia-Pacific. *Mitigation and Adaptation Strategies for Global Change*, 18(7), 1057-1076. https://doi.org/10.1007/s11027-012-9407-1

Lefale, P. (2010). Ua'afa le Aso – stormy weather today: traditional ecological knowledge of weather and climate: the Samoa experience. *Climatic Change*, 100, 317-335. https://doi.org/10.1007/s10584-009-9722-z

Limalevu, L., Aalsbersberg, B., Dumaru, P., & Weir, T. (2010). Adaptation on a small island. *Tiempo*, 77, 16-19.

Magee, A.D., Verdon-Kidd, D.C., Kiem, A.S., & Royle, S.A. (2016). Tropical cyclone perceptions, impacts and adaptation in the Southwest Pacific: an urban perspective from Fiji, Vanuatu and Tonga. *Natural Hazards and Earth System Sciences*, 16(5), 1091-1105. https://doi.org/10.5194/nhess-16-1091-2016

McCubbin, S., Smit, B., & Pearce, T. (2015). Where does climate fit? Vulnerability to climate change in the context of multiple stressors in Funafuti, Tuvalu. *Global Environmental Change*, 30, 43-55. https://doi.org/10.1016/j.gloenvcha.2014.10.007

McMillen, H.L., Ticktin, T., Friedlander, A., Jupiter, S.D., Thaman, R., Campbell, J., Veitayaki, J., Giambelluca, T., Nihmei, S., Rupeni, E., Apis-Overhoff, L., Aalbersberg, W., & Orcherton, D. F. (2014). Small islands, valuable insights: systems of customary resource use and resilience to climate change in the Pacific. *Ecology and Society*, 19(4), 44. https://doi.org/10.5751/ES-06937-190444

McNaught, R., Warrick, O., & Cooper, A. (2014). Communicating climate change for adaptation in rural communities: a Pacific study. *Regional Environmental Change*, 14, 1491-1503. https://doi.org/10.1007/s10113-014-0592-1

McNeeley S.M., & Lazrus H. (2014). The cultural theory of risk for climate change adaptation. *Weather, Climate, and Society*, 6, 506-519. https://doi.org/10.1175/WCAS-D-13-00027.1

Mercer, J. (2010). Disaster risk reduction or climate change adaptation: are we reinventing the wheel? *Journal of International Development*, 22, 247-264. https://doi.org/10.1002/jid.1677

Mercer, J., Kelman, I., Alfthan, B., & Kurvits, T. (2012). Ecosystem-based adaptation to climate change in Caribbean small island developing states: integrating local and external knowledge. *Sustainability*, 4(8) 1908-1932.

Moala, K. (2014). Inappropriate land-grabs in Tonga. *Pacific Institute of Public Policy*, 17 March. http://pacificpolicy.org/2014/03/inappropriate-land-grabs-in-tonga

Mortreux, C., & Barnett, J. (2009). Climate change, migration and adaptation in Funafuti, Tuvalu. *Global Environmental Change*, 19, 105-112. https://doi.org/10.1016/j.gloenvcha.2008.09.006

Moser, S.C. (2014). Communicating adaptation to climate change: the art and science of public engagement when climate change comes home. *WIREs Climate Change*, 5, 337-358. https://doi.org/10.1002/wcc.276

Moser, S.C., & Ekstrom, J.A. (2010). A framework to diagnose barriers to climate change adaptation. *PNAS*, 107(51), 22026-22031. https://doi.org/10.1073/pnas.1007887107

Nunn, P.D. (2009). Responding to the challenges of climate change in the Pacific Islands: management and technological imperatives. *Climate Research*, 40, 211-231. https://doi.org/10.3354/cr00806

Nunn, P.D. (2013). The end of the Pacific? Effects of sea level rise on Pacific Island livelihoods. *Singapore Journal of Tropical Geography*, 34, 143-171. https://doi.org/10.1111/sjtg.12021

Nunn, P.D., Mulgrew, K., Scott-Parker, B., Hine, D.W., Marks, A.D.G., Mahar, D., & Maebuta, J. (2016). Spirituality and attitudes towards Nature in the Pacific Islands: insights for enabling climate-change adaptation. *Climatic Change*, 136(3), 477-493. https://doi.org/10.1007/s10584-016-1646-9

Nurse, L.A., McLean, R.F., Agard, J., Briguglio, L.P., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E., & Webb, A. (2014). Small islands. In V.R. Barros et al. (Eds.) *Climate change 2014: impacts, adaptation, and vulnerability. Part B: Regional aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1613-1654). Cambridge, UK & New York: Cambridge University Press.

Pacific Community (SPC), Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Islands Forum Secretariat (PIFS), United Nations Development Programme (UNDP), United Nations Office for Disaster Risk Reduction (UNISDR) and University of the South Pacific (USP) (2016). *Framework for resilient development in the Pacific: an integrated approach to address climate change and disaster risk management* [FRDP] 2017 - 2030. Suva.

Rudiak-Gould, P. (2012). Promiscuous corroboration and climate change translation: a case study from the Marshall Islands. *Global Environmental Change*, 22, 46-54. https://doi.org/10.1016/j.gloenvcha.2011.09.011

Rudiak-Gould, P. (2014). The influence of science communication on indigenous climate change perception: theoretical and practical implications. *Human Ecology*, 42, 75-86. https://doi.org/10.1007/s10745-013-9605-9

Scott-Parker, B., Nunn, P.D., & Mulgrew, K., Hine, D., Marks, A., Mahar, D., & Tiko, L. (2016). Pacific Islanders' understanding of climate change: where do they source information and to what extent do they trust it? *Regional Environmental Change*, 17(4), 1005-1015. https://doi.org/10.1007/s10113-016-1001-8

Shen, S., & Gemenne, F. (2011). Contrasted views on environmental change and migration: the case of Tuvaluan migration to New Zealand. *International Migration*, 49(1), 224-242. https://doi.org/10.1111/j.1468-2435.2010.00635.x

van Aalst, M.K., Cannon, T., & Burton, I. (2008). Community level adaptation to climate change: the potential role of participatory community risk assessment. *Global Environmental Change*, 18, 165-179. https://doi.org/10.1016/j.gloenvcha.2007.06.002

Weber, E. (2014). Environmental change and (im)mobility in the South. In R. Anich, J. Crush, S. Melde, & J.O. Oucho (Eds.) *A new perspective on human mobility in the South* (pp. 119-148). Dodrecht: Springer. https://doi.org/10.1007/978-94-017-9023-9_6

Yamamoto, L., & Esteban, M. (2010). Vanishing island states and sovereignty. *Ocean & Coastal Management*, 53(1), 1-9. https://doi.org/10.1016/j.ocecoaman.2009.10.003

"The place where I live is where I belong": community perspectives on climate change and climate-related migration in the Pacific island nation of Vanuatu

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ABSTRACT: In recent years, narratives of the 'climate refugee' have abounded within the larger conversation regarding climate change. However, anthropologies from climate-vulnerable Pacific Islands—particularly those most targeted by 'climate refugee' discourse—have determined that the way many media outlets and policy specialists speak of climate-related migration is sensationalized, over-simplistic, and unrepresentative of how Pacific Islanders approach the issue. Aimed at illustrating how local context can add necessary nuance to the 'climate refugee' narrative, this paper investigates community perspectives on climate-related migration within a Pacific Island that has not yet been covered in the literature—the Melanesian country of Vanuatu. Based on qualitative fieldwork in Port Vila, Vanuatu, I explore the positions of ni-Vanuatu policymakers and climate activists regarding migration linked to climate change and argue that these be incorporated into policy analyses of climate-related migration in the Pacific. I find that ni-Vanuatu perspectives reflect an unwillingness to resettle as a result of climate change unless as a last resort, a prioritization of in-situ adaptation measures, and a preoccupation with maintaining cultural and livelihood links should resettlement occur. The implication of these findings is that policies that center these perspectives would allow for community control over movement—including the decision of whether to relocate at all. It will also emphasize prevention and minimization of the circumstances that precipitate climate-related migration. These findings serve as an original contribution to the topic of climate-related migration in Vanuatu—on which no scholarship has been done previously—and as representative of similar island nations.

Keywords: climate change, climate refugees, climate-related migration, community perspectives, migration, Pacific Islands, Vanuatu

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Introduction

Small island developing states (SIDS) have become the poster children for the phenomenon of climate-related migration, through which the impacts of climate change—increasingly intense weather events and natural disasters, drought, ocean acidification, and a projected rise in sea level of at least one meter (Gerrard & Wannier, 2013, p. 8)—render certain homes, countries, and areas uninhabitable. A commonly cited (yet often disputed) statistic approximates the emergence of roughly 200 million climate change refugees by 2050 (Gerrard & Wannier, 2013, p. 5). Indeed, major news outlets consistently publish media pieces on the plight of Pacific Islanders and the prospect they face of leaving their country as it crumbles into the sea (McNamara & Gibson, 2009, p. 479). The narrative of the 'climate change refugee'—a person forced across borders from their homeland as a result of climate change

impacts (McNamara & Gibson, 2009, p. 475)—is thus a visible part of climate change discourse. The validity of this 'climate refugee' label, and associated debate about policies and mechanisms to protect those who move because of climate impacts, has also been the subject of countless policy and legal analyses (Ash & Campbell, 2016; Biermann & Boas, 2008; Byrayan & Rajan, 2006; Hodgkinson & Young, 2013; Soloman & Warner, 2013; Williams, 2008; Wyett, 2014). However, this narrative has attracted criticism, particularly from scholars who have conducted fieldwork in the vulnerable areas in question, for being both sensationalized and over-simplistic (Farbotko & Lazrus, 2012; McAdam, 2012; McNamara & Gibson, 2009). Anthropologies of specific Pacific Island communities—particularly atoll nations most targeted by 'climate refugee' dialogue—have found that the way both the media and many policy specialists speak of climate-related migration is far more one-dimensional than how islanders approach the issue.

The disjuncture between policy analyses and anthropologies of affected local communities regarding climate migration begs the question: How can community perspectives inform analysis and policy formulation around the question of climate change-related migration? Answering this question is made complicated by the fact that "there is a paucity of empirical work on local people's perspectives of climate change impacts and the role of migration as a potential adaptation strategy" in the Pacific (Allgood & McNamara, 2017, p. 372). Of these empirical works, there is an overwhelming focus on Tuvalu, Kiribati, and the Marshall Islands (Allgood & McNamara, 2017; Constable, 2016; Farbotko & Lazrus, 2012; McNamara & Gibson, 2009; Mortreux & Barnett, 2009). Some literature also exists on specific communities in Fiji (McNamara & Des Combes, 2015), the Solomon Islands (Monson & Foukona, 2014), and Papua New Guinea (Donner, 2015; Rakova et al., 2009).

This study seeks both to answer the question of how community perspectives can inform climate migration policy, and to fill in gaps surrounding empirical research on these community perspectives, in a Pacific Island that has not yet been addressed in the literature—the Melanesian country of Vanuatu. Based on qualitative fieldwork in Port Vila, Vanuatu, I argue that incorporating the wishes of affected communities into policy responses offers the possibility of more nuanced, effective, and responsible approaches to the complexities of climate-related migration. Islander perspectives in Vanuatu reveal a reluctance to resettle as a result of climate change unless as a last resort, a prioritization of in-situ adaptation measures, and a preoccupation with maintaining cultural and livelihood links should resettlement ever occur. With this in mind, community-based policy, which inherently centers the perspectives, participation, and decision-making of affected communities, would allow for community member control over movement—including the decision of whether to move at all. It would also emphasize prevention and minimization of the circumstances that precipitate climate-related migration. Community-informed approaches to policy on climate migration may serve to bridge the inconsistencies between the place-specific findings of environmental anthropologists and the broader generalizations of many policy experts who work on the issue. This is particularly important given that "much literature surrounding climate change impacts in the Pacific and appropriate policy response fails to engage with policymakers, spokespeople and 'laypeople' within the Pacific regarding the geopolitics of relocation and migration" (Constable, 2016, p. 1035).

To substantiate this claim, I separate my argument into two sections. The first section contrasts the prevailing—and ultimately reductive—debates that preoccupy many policy analyses about Pacific climate migration with a number of anthropologies from specific Pacific Islands, thus illustrating the shortcomings of these analyses and the need for local context in addressing the climate migration paradigm. The second section presents the findings of my fieldwork within the context of Vanuatu, collected through a series of semi-structured interviews, and advocates for community perspectives as crucial to the formation of effective, locally appropriate policy around climate-related migration.

Given that there is a tendency to conflate and misuse terms in this realm of scholarship (Constable, 2016), it is important to clarify my use of terminology. There is no established distinction between forced migration (often referred to as 'displacement') and voluntary migration (Ash & Campbell, 2016), and it is well acknowledged in the literature that individual, household, or community decisions to voluntarily migrate can never be attributed entirely to climate change (Campbell, 2012; McAdam, 2012; Mortreux & Barnett, 2009; Nurse et al., 2014). Rather, a decision to voluntarily migrate is the culmination of a host of intertwining considerations—such as socioeconomic push and pull factors, personal considerations, and barriers like distance or institutional constraints—that may include, and may be exacerbated by, climate change (Constable, 2016; McAdam, 2012; Mortreux & Barnett, 2009; Nurse et al., 2014). Out of the many subsets of climate migration, the implication of the term in *this paper* is of long-term, voluntary, community-level resettlement. Throughout the paper, I refer to this phenomenon as 'climate-related migration' or simply 'climate migration'.

Figure 1: Map of Vanuatu. *Source:* Central Intelligence Agency, https://www.cia.gov/library/publications/the-world-factbook/geos/nh.html.

Vanuatu: a case study

The basis of my argument is evidence collected from a case study performed in the capital of Vanuatu—a 12,190 km^2 archipelago (Petz, 2013, p. 54) of 83 primarily volcanic islands in the South Pacific that is highly vulnerable to climate change impacts (Vachette, 2016; UNDP, 2014). Vanuatu belongs to the Melanesian sub-region of Oceania and is divided into six provinces—Malampa, Penama, Sanma, Shefa, Tafea, and Torba—that comprise different groups of islands. Over three-fourths of ni-Vanuatu people depend on subsistence agriculture and fisheries, marine resources, and remittances (Webb et al., 2015, p. 408), while most of the formal economy takes place in the country's urbanized capital, Port Vila (Craven, 2015, p. 224). Vanuatu is one of the most linguistically diverse countries in the world: Its population of 270,402 (World Bank, 2017) speaks well over 100 local languages (CIA, 2014, p. 5). The country's islands reflect a varied topography of elevated, forested land and some coastal plains (CIA, 2014, p. 5).

While several scholars have examined community perceptions of climate-related migration in the most heavily mediatized Pacific island nations (Farbotko & Lazrus, 2012; McAdam & Loughry, 2012; McNamara & Gibson, 2009), none have examined this question within the context of Vanuatu. Vanuatu is not as low-lying as the handful of coral atoll nations that are most often positioned as players in the 'climate refugee crisis' (e.g. Tuvalu, Kiribati, the Marshall Islands), and sea level rise is not the primary climate change impact that threatens the country (McNamara & Gibson, 2009, p. 476).

In terms of natural disasters, however, the World Risk Report considers Vanuatu more at risk and more exposed than any country in the world (Comes et al., 2016). Vanuatu has exposure to cyclones, flooding, storm surge, landslides, prolonged drought and wet periods driven by the El Niño Southern Oscillation, frequent earthquakes, and occasional tsunamis and volcanic eruptions (Petz, 2013, p. 16). Climate change is expected to increase the intensity of both droughts and extreme weather events like storms and cyclones (Hugo & Bedford, 2012; Campbell & Warrick, 2014; Petz, 2013). These impacts—alongside ocean acidification, and saltwater intrusion (Webb et. al, 2015)—will have a more direct impact on the ni-Vanuatu people than will sea level rise. For example, Webb et al. (2015, p. 408) have already observed disruptions of crop production and food security in Vanuatu as a result of climate variability. Furthermore, some of Vanuatu's more low-lying coastal areas, including parts of its urban center Port Vila, will be relatively more susceptible to sea level rise and coastal erosion than other parts of the country (Campbell & Warrick, 2014; Petz, 2013).

This reality renders any environmental change that Vanuatu may experience more complex than the traditional 'climate refugee' narrative allows for. Vanuatu, as a 'high island', does not face immediate questions about cross-border climate migration prompted by sea level rise; rather, the country grapples with predominantly far-off (but not necessarily inevitable) possibilities of migration and with the associated impacts such migration will have on communities' cultures, livelihoods, and climate adaptation strategies.

Vanuatu's status as a 'high island' is also interesting because, despite its distinction from atoll nations that more intimately face potential sea level rise, the country is still often characterized by journalists and policy analysts as at high risk for climate migration simply because it is a Pacific Island (McNamara & Gibson, 2009, p. 478). For example, a relatively recent article in *The Guardian* evaluates the access that some Pacific Islands have to migration pathways before lamenting, "but the people of PNG, the Solomon Islands, Vanuatu, Nauru and Kiribati have no such rights, and essentially no place to go" (Doherty, 2015). The article thus erroneously implies that these nations, Vanuatu included, will inevitably undergo levels of environmental change substantial enough to push their populations overseas. Similarly, in 2005, Tegua islanders' move within Vanuatu's northern Torres Islands—an instance of present-day relocation in Vanuatu—was heralded by media and the United Nations

Environmental Programme as evidence of some of the first 'climate refugees'; in actuality, however, the village's choice to relocate was linked to a non-climatic geological process (Siméoni & Ballu, 2012).

Academic scholarship also at times puts "forward the case that migration may be inevitable for many small island developing states," including Vanuatu (Allgood & McNamara, 2017, p. 373). Several studies analyze the notion of climate migration throughout most Pacific Islands, not just atolls (Bedford & Campbell, 2013; Campbell & Warrick, 2014; Petz, 2013; Wyett, 2014). Campbell & Warrick (2014, p. 19), for instance, argue: "climate change may induce and force migration from a large number of Pacific island countries […] it is essential not to neglect [non-atolls] that may be just as exposed but in different ways." Other scholars echo this reasoning by including Vanuatu in their respective calls for climate migration-related 'policy intervention' in specific island nations (Ash & Campbell, 2016; Wyett, 2014). Wyett (2014, p. 182) even discusses possible "host countries," implying that migration from states she identifies will likely be cross-border.

The fact that climate-related mobility within Vanuatu has already been subject to media scrutiny and scholarly discussions affirms the island nation's attractiveness as a case study for the research question. If climate migration policy is to be formulated—and is indeed already being discussed—within the context of Vanuatu, understanding ni-Vanuatu perspectives on climate migration as a strategy is crucial. At the same time, however, it is important to constrain the majority of this argument to Vanuatu and similar island nations of which the case study may be representative.

Methodology

The qualitative fieldwork underpinning this paper was conducted in January 2016 as a series of hour-long, semi-structured interviews with 19 policymakers, scholars, and civil society members in Vanuatu's capital Port Vila, on the island of Efate. The analytical method used an emergent, rather than pre-set, coding method to identify trends. For the sake of maintaining these participants' anonymity, I refer to them in this paper by neutral signifiers (e.g. Interviewee 1).

The eight policymakers I interviewed worked in or with Vanuatu's Ministry of Climate Change, and a majority were members of the recently-created National Advisory Board for Climate Change and Disaster Risk Reduction (NAB)—a committee of governmental and non-governmental members acting "as Vanuatu's supreme policy making and advisory body" for disaster risk reduction and climate change initiatives (NAB, 2016). The nine civil society members I spoke to worked for organizations that implement climate change adaptation projects in Vanuatu. Two of these organizations were international or regional organizations—the International Organization for Migration (IOM) and the German development organization GIZ—while the rest were locally-based NGOs. Lastly, I spoke with two local stakeholders who had scholarly expertise on ni-Vanuatu culture and legal systems. Fifteen of the 19 interviewees were ni-Vanuatu; five were women, and 14 were men.

Because the majority of my interviewees occupied relatively elite administrative positions in the country's capital, it is important to note that the perspectives I collected are by no means exhaustive or wholly inclusive of every subset of ni-Vanuatu society. Certain biases will inevitably arise from sourcing interviewees from NGO workers and policymakers in Port Vila. The capital is arguably more influenced by 'western' culture than the rest of the country, and interviewees' attitudes towards and ways of speaking about climate change will likely be different from those of villagers removed from urban areas (Granderson, 2017). This being said, 15 of 19 interviewees were themselves ni-Vanuatu, with familial and kinship ties with Vanuatu's outer islands; they all constituted, by Kelman's (2010, p. 606) standards, "local voices." Furthermore, because these actors work closely on climate policy and programs—

often working to implement adaptation projects at the community level—I consider them to have a substantial enough grasp of the mindsets of ni-Vanuatu communities regarding climate impacts to provide value to my findings. This reasoning does not, however, exclude the pressing need in subsequent studies for local perspectives from communities in Vanuatu's islands outside of Efate.

Another important qualification on methodology is the possibility of confirmation bias from respondents: It is possible that some tailored their responses to what they believed I wished to hear. Given this, I was careful to eliminate any sense of direction or expectation when phrasing and posing the questions.

Beyond the 'climate refugee debate': the need for local perspectives

Limitations of mainstream climate migration policy analyses

In an exhaustive document analysis, McNamara and Gibson (2009, p. 479) found that between 1970 and 2004, over 300 news articles about 'climate refugees' appeared in various media outlets, using language that was, "on the whole, dramatic and sensational." As discussed above, even Vanuatu—a 'high island' less exposed to sea level rise and the perceived existential threats associated with it—has been subject to this discourse, simply because it is a Pacific Island. However, a number of anthropologies have found that many Pacific Islanders find the label of 'climate refugee' offensive and incompatible with their own conceptions of "human dignity" (McAdam, 2012, p. 9) and agency in the face of climate change (Constable, 2016; Farbotko & Lazrus, 2012; McNamara & Gibson, 2009; Mortreux & Barnett, 2009).

In this paper, my primary interest in the 'climate refugee' narrative is the way in which it has seeped into policy papers and academic studies, and why this in turn reinforces the need to add the context of local perspectives to policy recommendations on climate migration. It is important not to conflate media discourses of the 'climate change refugee' with policy analysis, but it is also vital to consider the impact that this media discourse can have on scholarly work. While the narrative of victimized, drowning islanders has been much more pervasive in the media than in literature by NGOs and academics (Constable, 2016; Mortreux & Barnett, 2009), Farbotko and Lazrus (2012, p. 10) still observe that "the term climate refugee […] is becoming the basis for policy development." Indeed, even amongst academics and "experts in the field" (McAdam, 2012, p. 122), a number of papers draw upon imprecise language that evokes the 'climate refugee' concept (Barnett, 2017; McAdam, 2012). Early scholarship on this issue in particular tended to downplay island resilience, the complexity of migration, and capacity to adapt in-situ (Constable, 2016; Nurse et al., 2014; O'Neill & Barnett, 2008).

Meanwhile, in the realm of policy scholarship, a number of political scientists and legal scholars debate 'the legal challenge' of climate-related migration: the fact that international and refugee law lack concrete protection mechanisms for those who would wish to relocate as a result of climate change, particularly across borders. Arguments abound for and against expanding the 1951 Refugee Convention to include protection for climate migrants, as well as for and against the creation of a new legal instrument specifically for their protection (among others, see Biermann & Boas, 2008; Docherty & Giannini, 2009; Falstrom, 2001; Hodgkinson & Young, 2013; McAdam, 2012; Soloman & Warner, 2013; Williams, 2008). Some have even gone beyond the realm of policy recommendations: The Australian Labour Party's "short-lived 2006 policy document, Our Drowning Neighbours" (Constable, 2016, p. 1033) and a 2007 legislative bill by the Australian Green Party both make concrete policy *proposals* for a 'climate refugee' visa status (Farbotko & Lazrus, 2012, p. 10).

The significance to this paper of these scholarly debates, and of the few accompanying policy proposals, is their presumption about the likelihood of climate impacts precipitating migration, and about Pacific Islanders' willingness to move. It is given that "any discussion of

developing migration pathways needs to respect that many people are not willing to leave their homes" (Constable, 2016, p. 1034)—yet very few of the policy pieces discussed above engage substantially with this fact, or allude to it. This is worrying to some Pacific scholars who fear that focusing on migration as a *solution* to climate-related challenges will in turn obfuscate and distract from other policy responses, such as in-situ adaptation and meaningful cuts in carbon emissions (Allgood & McNamara, 2017; Barnett, 2017; Barnett & O'Neill, 2012; Mortreux & Barnett, 2009). Others go further, warning that a victimizing 'climate refugee' discourse "may directly undermine local adaptive capacity, if it reduces incentives for investors and donors to provide funding […] and for islanders themselves to manage their resources sustainably" (Betzold, 2015, p. 483).

With this in mind, policy approaches that presume a high likelihood for climate migration across the Pacific, and that postulate in detail over legal protection mechanisms for these migrants, often seem at odds with literature capturing the realities and lived experiences of Pacific Islanders. For one, there is often a presumption—particularly for those who advocate 'refugee' terminology—that the potential migration in question will be cross-border. However, excluding small coral atoll countries, Pacific scholars agree that the majority of displacement in vulnerable islands will likely be within borders (Bedford & Campbell, 2013; McAdam, 2012; Solomon & Warner, 2013; Zetter, 2010). Second, many of these pieces are so strictly engaged with discussions of policy, law, and international relations that they miss a crucial reality described in many Pacific anthropologies: Not all Pacific Islanders will want to move to avoid climate impacts (Barnett & O'Neill, 2012; McNamara & Gibson, 2009; Mortreux & Barnett, 2009), and islanders in both atoll and non-atoll countries who do migrate are primarily doing so as a result of drivers unrelated to climate change (Campbell, 2012; Mortreux & Barnett, 2009; Nurse et al., 2014). Given many Pacific Islanders' reluctance to move, policy speculation about climate migration may sometimes lack the local context to ask the right questions and may obscure proposals for other adaptation options. Farbotko and Lazrus (2012, p. 16), for instance, observe a community preference for policies that would *negate the need* for migration or for protection as a refugee:

> In the eyes of Tuvaluans, permission to cross a western border […] falls far short of the climate change remedies required: extensive, immediate reductions in global greenhouse gas emissions, and significant legal and financial action to redress lost livelihoods and self-determination if emissions reduction is not achieved.

To these islanders, policy around climate-related migration requires so much more than the simple guarantee of migration pathways and rights. And yet, with the exception of Soloman and Warner (2013), none of the legal and policy papers reviewed above include any form of nuance about preventing the circumstances that would prompt migration. It follows that additional context is needed to widen the perspectives of these papers, and to foster that needed nuance.

The case for community perspectives in climate migration policy

A tangible disconnect exists between the anthropologies and policy pieces enumerated above. In a background paper by Australia's Human Rights and Equal Opportunity Commission (HREOC) (2008, p. 23) on Human Rights and Climate Change, for example, the authors commend a "proposal to resettle populations displaced by climate change in Australia" and argue that migration pathways like New Zealand's Pacific Access visa category ought to expand their eligibility requirements. By assuming that the only obstacles to resettling climate-affected populations are the eligibility terms of the Pacific Access visa category—and not the cultural and economic risks that might deter Pacific Islanders from moving to another country (Campbell, 2012, p. 78)—the background paper misses a key point.

The interviews I conducted in Vanuatu, like the Pacific anthropologies outlined above, revealed a strong aversion to the prospect of moving across borders to escape climate change impacts. All 19 interviewees agreed that, if relocation due to climate impacts were to occur at all, internal migration would be both preferable and more likely "because you can maintain your culture, your way of life" (Interviewee 12).

Similarly, the expansion of the refugee definition to climate-vulnerable populations is not in line with the expressed wishes of those who live in Vanuatu—despite the exhaustive discussion that has abounded in mainstream policy approaches regarding such an expansion. The activists and policymakers I interviewed in Port Vila indicated that they refused to accept the status of a 'climate refugee'. "We're almost admitting some sort of defeat when we talk about relocation," one NGO worker mentioned (Interviewee 1). A ni-Vanuatu climate activist reflected that "I think it's really confusing to talk about moving people from where they live to another place due to climate change […] From my understanding, if you ask people to move from their own land, it's really difficult" (Interviewee 2). Such reflections echo back to the findings of Pacific Island-based scholarship, which illustrates a long-standing attachment to land in the Pacific and the complexity inherent in relocating from it (Allgood & McNamara, 2016; Bonnemaison 1985; Campbell, 2012; Barnett & O'Neill, 2012; Barnett & Webber, 2012; McNamara & Des Combes, 2015; Monson & Foukona, 2014; Rakova et. al, 2009; Tonkinson 1985). While it is important not to discount the strong tradition of mobility in the Pacific (Barnett & Campbell, 2015; Betzold, 2015; Lazrus, 2012; Warrick, 2011), it is also important not to discount the "extremely important losses that dislocation from the land will bring about" (Campbell, 2012, p. 78) for Pacific communities, and their reluctance to undergo that dislocation unless as a last resort.

Policy recommendations like the HREOC's, which are preoccupied with technical considerations like international visa categories, thus seem remarkably unaware of the local realities and nuances that are encapsulated in the above data. This is not to say that policy should not work to secure climate migrants' rights or to envision how the current "migration pathways deficit" (Constable, 2016, p. 1033) might be filled should internal or cross-border climate-related migration occur. But in not considering local context, such as a strong reluctance to migrate abroad, the paper renders itself almost irrelevant. At the same time, it contributes to a political atmosphere that may push cross-border migration over other adaptation or mitigation strategies as an appropriate response to climate change.

The example of the HREOC paper illustrates a salient point: policy that is not informed by the perceptions and viewpoints of the affected island communities will inevitably result in disconnect (Barnett, 2017; Barnett & Campbell, 2015; Scott 1998). It also reinforces why—as scholars like Campbell and Warrick (2014), Ash and Campbell (2016), and Wyett (2014) make their cases for expanding and increasing policy development around climate change and migration in non-atoll islands such as Vanuatu—it is important to ensure that climate migration policy development incorporates a foundational understanding of ni-Vanuatu attitudes in its analysis. Indeed, if implemented, uninformed climate migration policy recommendations seem outright alarming, given that "resettlement schemes always fail when the people who are moved do not want to be, and/or have no control over the choice of destination and process of movement" (Barnett & O'Neill, 2012, p. 10).

Community-informed policy will inherently center the perspectives and decision-making of affected communities. I posit that the policy that would emerge from this sort of community-based approach would be *stronger* as a result and would aid in avoiding the very real possibilities of maladaptation that can accompany climate-related resettlement (Barnett & O'Neill, 2012). In the words of a policymaker who works in the office of Vanuatu's Shefa province, "community participation at all aspects [of policy] is a must […] It makes for better policy when you give a voice to communities" (Interviewee 6). Reimagining how we want

policy discussions around climate-related migration to better accommodate these voices, within the context of Vanuatu, is the subject of the next section.

Notes from the field: recommendations for a community-informed approach to climate migration in Vanuatu

A predominant reason that non-community based policy is so often misguided is its failure to take into account cultural considerations, such as how ni-Vanuatu identity is tied up in land. According to Campbell (2012, p. 60), "land in Pacific Island countries tends to have meanings to those who 'belong' to or are 'part of it' that are often difficult to encapsulate in English or other colonial languages." Policymakers, National Advisory Board (NAB) members, and civil society organizations alike expressed similar sentiments, noting: "culture is a mainstay of Vanuatu—if you take that away from [the people], it makes them more vulnerable" (Interviewee 3). One policymaker, whose extended family had relocated after a volcanic eruption, noted, "Vanuatu is a cultural place, [but] in some islands, there are cultures that are linked to the land. If [people] move away, they lose that culture and their resources" (Interviewee 4). These perspectives align well with the reflections of islanders in climate migration studies in other Pacific Islands (Campbell, 2012; Constable, 2016; Farbotko & Lazrus, 2012; Mortreux & Barnett 2009). Given the notions of "distinct identity, a feeling of belonging (because of genealogy and community), lifestyle, family connections, and culture, all of which seemed to be irrevocably tied to place" (Mortreux & Barnett 2009, p. 110), it makes sense that choosing to migrate in response to climate impacts is not a decision that interviewees would make lightly.

Fourteen of the 15 ni-Vanuatu interviewees thus emphasized how cultures and livelihoods would be drastically, and worryingly, affected by climate-related relocation (Interviewees 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17). It should be noted here that cultural losses linked to migration may not be an entirely new phenomenon for these interviewees to consider; similar experiences are likely already occurring when ni-Vanuatu move from outer islands to Vila. However, the potential for migration-linked cultural loss in other contexts did not preclude interviewees' concern for this process within the context of climate-related migration.

This is also not to say that Pacific Islanders are fixed to their land to the point of inadaptability; many respondents commented on the larger migratory tradition that characterizes ni-Vanuatu society. Indeed, "the rootedness of Melanesian societies does not necessarily restrict the mobility of their membership" (Bonnemaison 1985, p. 48). Bonnemaison's (1985) seminal work on ni-Vanuatu mobility conjures the metaphor of "the tree and the canoe," which both links ni-Vanuatu to their land and enables them to "migrate with the knowledge that they always will have a home to which to return" (Campbell & Warrick, 2014, p. 21). With this in mind, Barnett and Campbell (2015, p. 170) observe that "Pacific Island people have successfully coped with [various changes] for centuries, and sometimes migration is one among their many deliberate adjustment strategies." In Vanuatu, internal, mobility is common (Bonnemaison, 1985; Warrick, 2011, p. 218): Circular mobility in particular (Bedford, 1973; Bonnemaison, 1985) has been notable in past decades (Petrou, 2017). Resettlement has also taken place as a result of non-climatic processes, such as volcanic eruptions on the island of Ambrym (Tonkinson, 1985). It is thus not absurd to imagine ni-Vanuatu people or communities using internal migration as a means of coping with climatic stressors (Kelman, 2008; Warrick, 2011, p. 340).

However, the fact that migration and mobility is a common practice in the Pacific (McAdam, 2012; Barnett & Campbell, 2015; Lazrus, 2012; Warrick, 2011) does not negate the difficulties that may accompany permanent relocation (Campbell, 2012; Campbell & Warrick 2014; Farbotko & Lazrus 2012). Campbell (2012, p. 63) argues:

> coexistence of mobility and stability in many Pacific places… invokes the paradoxical notion of both roots and routes as important aspects of Pacific island lives … Many migrants, even long-term ones, still consider themselves to belong to their land, even if they are physically dislocated from it.

Thus, while Pacific Islanders' "sense of history is strongly connected to mobility" (Farbotko & Lazrus, 2012, pp. 15-16), it is "the prospect of permanent loss of land and self-determination, particularly if there is no forthcoming remedy for these losses from those who caused the damage" that complicates the idea of leaving land in the Pacific. In the case of the Maat people, who relocated from Ambrym to Efate after a volcanic eruption, most intended to eventually return to Ambrym and considered themselves Ambrymese even 15 years after resettlement (Tonkinson, 1985). Maintaining a relationship with their old village was crucial: This "territorial bond" to the "connecting homeland" is characteristic of migration in Vanuatu (Bonnemaison, 1985, pp. 57-59). A community perspective on climate-related migration in Vanuatu must thus consider the complexity and loss that relocation from land—particularly permanent relocation—entails.

The interviews I performed in January 2016 with ni-Vanuatu policymakers and stakeholders recognized this complexity. One policymaker in the National Disaster Management Office (NDMO) recalled a specific example in which an attempted relocation in 2009—from the island of Gaua to the island of Vanua Lava—went poorly due to a lack of cultural agreement or dialogue between the host and relocated communities (Interviewee 15). In his eyes, considerations of the cultural links that communities have to their land are thus crucial to successful relocation. Such sentiments align well with similar scholarship in the Pacific regarding climate migration (Barnett & O'Neill, 2012; Campbell, 2012; Donner, 2015; Lazrus, 2012; McNamara & Des Combes, 2015; Monson & Foukona, 2014). To minimize cultural frictions, maintain cultural ties, and center a ni-Vanuatu understanding of land in climate-related resettlement policy, the voices of ni-Vanuatu communities should be sought out and adhered to in this policymaking.

One NGO worker in Vanuatu suggested that communities would most prioritize the transference of their specific community *services*—a church, a school, or a clinic—to ensure a smoother relocation (Interviewee 1). Another suggested that communities should aim to move to similar environments: For instance, fishing communities should attempt to retain access to coasts so as to maintain their fishing tradition (Interviewee 18). These suggestions indicate an interest in maintaining social networks, institutions, and practices in the event of relocation—all of which ultimately facilitate and ease the process (McNamara & Des Combes, 2015; Monson & Foukona, 2014; Rakova et. al, 2009). Barnett and Webber (2012, p. 53) observe that in the context of climate-related migration, community consultations on policy will almost always minimize "social and political costs" of the move. The concrete, community-minded suggestions from ni-Vanuatu decision-makers on ways to maintain links to land even after relocation seem to confirm this and further highlight the merits of a community-informed approach to climate-related migration.

A more obvious trend in my interviews was that communities may express preferences to move to a certain place over another. These preferences should be respected and attended to well before haphazard policy suggestions of, for example, relocating ni-Vanuatu people to a country like Australia. Interviewees demonstrated an overwhelming preference for internal migration. All 19 agreed that the ni-Vanuatu population would find internal migration not only more practical than cross-border migration, but also preferable from the standpoint of maintaining culture and way of life (Interviewees 1-19). For example, during Cyclone Pam in March 2015, the island of Mataso saw the internal (but temporary) relocation of certain communities, executed by the IOM. However, according to the director of an international

NGO, a lack of consultation with the community ultimately resulted in a less-than-harmonious outcome:

> [The move] was done by IOM, and they paid for everything. What this did is it created a huge lack of resilience, a huge expectation. If you moved normally, you would use your kinship networks. But here instead, the community felt very reliant, and very isolated. They felt like "we have nothing; we need everything." […] It just ruined cultural ties. There's a way probably to do it that strengthens traditional systems of exchange, because traditional systems of exchange do happen all the time […] Using the social networks makes the move more sustainable (Interviewee 1).

The lack of community consultation by the IOM during this temporary relocation denied the community a chance to express preferences for movement along certain social networks or kinship networks. This, in turn, led to a community that was significantly less well-integrated into its host community and that risked maladaptation. A policymaker in the Department of Energy, whose ancestral village in Ambrym had been relocated, reflected that communities would be best served if they could *choose* where to move, following existing social ties: "The ni-Vanuatu is a family-oriented people, and you have extended families in other islands […] These connections help a lot, you have a second option [for relocation] this way" (Interviewee 4). Literature about climate-related relocations affirms these interviewees' preference for using kinship links to ease the prospect of migration. Monson and Foukona (2014) discuss the utility of established "social relations, and shared histories of intermarriage and exchange" in navigating resettlement in the Solomon Islands—Vanuatu's northern, Melanesian neighbor. In the context of Tuvalu, Mortreux and Barnett (2009) similarly assert that "the existence of social networks at the destination […] provide[s] important practical support in terms of accommodation and employment connections, as well as providing a sense of community" (p. 107). Once again, it becomes evident that when a community must relocate, a community-based approach to relocation policy, developed by listening to the voices of the community in question, will not only be respectful and aligned with community preference. It will also lead to more meaningful policy.

The significance of the suggestions highlighted above is that they derive from culturally appropriate and relevant interests, which would inevitably arise through a community-informed approach to climate-related migration. In an interview, the head of an umbrella organization of Vanuatu's civil society organizations expressed concern over the "diverse cultural dynamics" (Interviewee 3) that would be at stake when communities faced relocation due to climate change. However, he reflected, the national government and international aid organizations often do not seem to consider these cultural sensitivities when crafting climate change policy, which in turn leads to feelings of disconnection in local communities. Comments like this, highlighting a lack of consultation with local entities regarding climate change decision-making, were common throughout my fieldwork; 75% percent of interviewees advocated consultation and inclusion of smaller administrative units than the state in climate policy—whether these be the province, the area council, the tribal council, or another village-level decision-making body (Interviewees 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 13, 14). The decision-makers I spoke to thus seemed to advocate for the rights of communities to participate at all levels of climate change policymaking. Successful relocations that do occur will likely address community priorities: reliance on pre-existing networks and cultural ties, and the maintenance of livelihood and cultural tradition from place to place. Community members and local groups are much better acquainted with these than the national government or aid organizations. To not consult them despite this trove of knowledge—or to consult with them only late the process of climate policy formulation—would be foolish at best and irresponsible at worst.

It is also notable that many of these recommendations evoke similar approaches to those of a community-led relocation project in Papua New Guinea, another Melanesian country. Ursula Rakova, founder of the Tulele Peisa project to relocate 1,700 residents from the eroding Carteret Islands, writes: "We wish to maintain our cultural identity and live sustainably wherever we are. We are cognisant of the many complexities involved in integrating the Carterets' people into existing communities that are geographically, culturally, politically and socially different" (Rakova et al., 2009). As such, the project involves plans for exchange programs from host communities and migrant communities "for establishing relationships and understanding;" for the carryover of income-generating activities and social services like education and health programs; and for mechanisms to maintain "the links between the relocated Carterets' people and their home island, sea resources and any remaining clan members (who are not yet relocated)" (Rakova et al., 2009). The fact that the policy recommendations of the 19 interviewed stakeholders in Port Vila so closely resemble the carefully laid-out plans of Tulele Peisa suggests that community participation in decision-making makes for consistently strong, thoughtful, and locally appropriate policy. Records of climate-linked relocations in Fiji and the Solomon Islands have also revealed a similar community preoccupation with maintaining a source of livelihood, incorporating community participation in relocation activities, and retaining social institutions during relocation (McNamara & Des Combes, 2015; Monson & Foukona, 2014).

However, community input in discussions of climate migration might not advocate migration at all. Some communities will not be willing to leave their homes until there is no other option—which is certainly understandable given the widespread cultural ties to land outlined above. In the eyes of two ni-Vanuatu climate activists, to give up before they absolutely must is to give up on their claims to their home and to their culture (Interviewees 1 & 5). Similarly, the assortment of policymakers and NGO workers interviewed—stakeholders who are intimately familiar with climate change and the impacts it will have on Vanuatu—was largely in agreement that it was in the best interest of vulnerable communities to only move if alternative measures of in-situ adaptation had failed (Interviewees 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 18).

This preference aligns well with Allgood and McNamara's (2016, p. 380) recent findings that many of the I-Kiribati interviewed would consider migration as an option—interestingly, at a higher rate than older fieldwork in Kiribati has shown—but specifically "an option of last resort." McNamara and Des Combes (2015), who examine a resettlement of a village in Fiji as a 'last resort' measure to sustain livelihoods, and Donner (2015), who draws lessons from the historical resettlement of the Gilbertese people to the Solomon Islands, also corroborate the preferences that Pacific Islanders have had for moving only if other adaptation options are no longer available. When this is the case—when community participation indicates a determined community will to first examine alternative options to migration—such decisions must be respected (Constable, 2016). And knowledge of these perspectives before climate migration policy is formed may help reorient this policy to more strongly emphasize preventive measures through in-situ adaptation.

The reluctance of ni-Vanuatu people to strongly consider migration makes Vanuatu's current governmental policies prioritizing *climate resiliency* projects—projects that build "the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from" climate change (U.S. Climate Resilience Toolkit, 2016)—all the more logical. The interviews I conducted with NAB and civil society members reflected an overwhelming prioritization of adaptation projects that increase resilience within all sectors in Vanuatu, from agriculture and livestock to local affairs management. One NGO director explained the importance of these adaptation projects within the context of migration:

> From what I can tell from displacement, at least at the community level, we don't have the very, very low-lying atolls that we often talk about when people move. But the things people would be moving from would be the contamination of ground water, food security, *etc.*

On the island of Pele, for instance, 11 of the existing 23 groundwater wells had been affected by salinization within the past 25 years as a result of climate impacts (Interviewee 1). Because of this, the director reflected, there is a need for a stronger focus on adaptation projects that could build water security and pre-empt a move. Adaptation might also entail cultivating alternative livelihoods in islands where a key industry—such as the fishing of a particular aquatic species—is threatened by climate change (Interviewees 10 & 11). This would allow the communities to remain, and "not necessarily mov[e] because one aspect of your livelihood has been altered" (Interviewee 1). Similarly, a technical advisor to NAB noted that the government needs to work towards "disaster proof" communities and climate-resilient infrastructure (Interviewee 9), while a policymaker in the Department of Energy highlighted community resiliency as important because "it is not about curing, but also about prevention" (Interviewee 13). These community responses favoring adaptation should not be considered in a vacuum; rather, these adaptation strategies can contribute to effective policy on climate migration, in that they help minimize and pre-empt the conditions that would eventually culminate in climate-related relocation.

Interviewees' preference for in-situ adaptation strategies becomes even more relevant given the myriad of existing scholarship pointing to the resilience of traditional societies—and more specifically, of Pacific Islander communities—to natural disasters and environmental change (Barnett & Campbell, 2015; Campbell, 2006; De Souza et al., 2015; Kelman & West, 2009; McNamara & Prasad, 2014; Nurse et al., 2014; Vachette, 2016). Many Pacific climate migration policy recommendations that exclude local context can be criticized as "not entirely recogniz[ing] the capacity of islands and local communities to adapt in situ" (De Souza et al., 2015, p. 5). Kelman and West (2009, p. 2) point to the fact that "some characteristics" of SIDS—specifically their "tight kinship networks, unique heritage, a strong sense of identify and community, creativity for sustainable livelihoods, remittances from islander diasporas supporting life on SIDS, and local knowledge and experience of dealing with environmental and social changes throughout history"—may lend island communities substantive adaptive capacity to climate change and associated impacts. Regarding Vanuatu specifically, Vachette (2016, p. 30) notes that "ni-Vanuatu […] have always showed a certain level of resilience to the uncertainty and severity of hazards through demonstration of preparedness, response and adaptation capacities," citing a host of literature about historical and cultural examples of ni-Vanuatu resilience.

Furthermore, the findings of Farbotko and Lazrus (2012) and McNamara and Gibson (2009)—that Tuvaluans regard climate change mitigation and loss and damage compensation as needed responses to *pre-empt* climate-related migration—were mirrored in my interviews of ni-Vanuatu citizens and policymakers. When asked what 'responsibility' the international community had to respond to climate change and its associated impacts (including migration), many interviewees indicated that technical and financial transfers, under the category of a loss and damage mechanism, would be necessary (Interviewees 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15). Moreover, the majority of interviewees believed that migration as a result of climate change was simply not yet an option that many ni-Vanuatu would consider (Interviewees 1, 2, 4, 5, 6, 7, 10, 11, 12, 13, 15). With these perspectives in mind, it is difficult to understand the urgency of, for example, Wyett's (2014) suggestion that we begin to identify potential host countries for the expected climate migrants from Vanuatu and other countries.

An alternative to migration as a climate adaptation strategy is prevention in the form of significant investment by government and donors into adaptation projects, and in the form of

significant commitment by high-polluting countries to ensure mitigation and mechanisms for loss and damage. In eyes of the people I interviewed, international organizations, donors, and states need to address "the real roots [of the] problem" (Interviewee 15)—greenhouse gas emissions by more affluent countries—and to provide adaptation assistance through expertise and funds; only in doing so can they properly 'address' climate-related migration. This emphasis on lessening climate change is perhaps why many ni-Vanuatu assert that the correct response to the possibility of migration—and the one most strictly adhered to by its Ministry of Climate Change—is to continue to adapt to, and to fight against, climate impacts until relocation is necessary. In essence, community-informed international climate migration policy must, in addition to advocating community control over relocation, include efforts to prevent the circumstances that would precipitate climate-related migration. In the words of Mortreux and Barnett (2009, p. 111) "this is not to say that people should not have the choice to migrate, but rather that people should not be left with no choice but to migrate."

The summaries of the interviews I performed in Port Vila reveal a complex relationship with the prospect of climate-related migration in Vanuatu. These perspectives are indispensable to the formulation of policy around this issue, and understanding them slightly underwhelms the relevance of policy briefs and analyses that postulate in detail over the legality of a 'climate refugee' label or over possible host states for relocated Pacific Islanders. The people of Vanuatu, and possibly of other 'high' Pacific Islands, will likely not be contemplating migration across borders as a response to climate change (although contemplation of migration for other reasons, such as economic drivers and participation in seasonal worker programs, may be another story). Furthermore, policy that does approach migration policy in Vanuatu should spend substantial time discussing the preferences outlined here—for internal migration based on kinship networks *as a last resort,* for increased mitigation and adaptation measures, for loss and damage mechanisms that rectify the harm already done, and for deep thoughtfulness in maintaining cultural ties, livelihoods, and social infrastructure.

These broader recommendations aside, this study mostly did not explore technical details that could contribute to community-informed migration policy, and this would be a fruitful place for future study. However, two technical recommendations from existing scholarship merit mention. First, "without approval and support of the local level, the implementation of national decisions will fail" (Betzold, 2015, p. 485). Any policy discussed or formulated on climate migration should thus establish clear procedures to ensure a participatory process of community-led, informed decision-making in said policy. Second, certain complexities arise with the idea of 'community', which throughout this paper has been discussed as largely monolithic. Not addressing these complexities could result in friction and the marginalization of certain community members' voices (Buggy & McNamara, 2015). Given that migration is a highly individual decision, climate migration policy approaches should adhere to the four guidelines outlined by Buggy and McNamara (2015), in order to minimize the risk of maladaptation and of certain community members being denied an adequate say in relevant decisions.

Conclusion

The dominant narrative around Pacific Island 'climate refugees' and the associated policy analyses and recommendations that accompany it are often grossly at odds with the perspectives and intentions of the climate-vulnerable island communities themselves. As Allgood and McNamara (2016, p. 271) note, "documenting and understanding local perspectives of climate change experiences, adaptation and migration is often overlooked in these discussions [about climate-related migration] despite being crucial to them." This paper thus attempted to fill this gap, by examining ni-Vanuatu perspectives on the possibility of climate-related migration in the country. In Vanuatu, community-informed policy responses

to climate migration would allow for community control over movement and would place a strong emphasis on maintaining cultural and livelihood links to land in the event of relocation. Policy that takes into account the wishes of the ni-Vanuatu population would also emphasize prevention and minimization of the circumstances that precipitate climate migration. Mitigation of loss and damage would thus be crucial facets of an inclusive approach to climate migration.

The results of the fieldwork elaborated here add to the body of anthropological literature contesting the traditional 'climate refugee' narrative from the perspective of a less sensationalized Pacific Island country that is nonetheless often swept up in mainstream climate change migration policy and media coverage. Given the visible lack of scholarship on approaches to climate change-related migration in Vanuatu and in other, less mediatized island states, much more work should be done to broaden this base of scholarship. As mentioned above, it would be helpful for this study to be replicated in a way that better draws from directly impacted community members, rather than policymakers and NGO practitioners based in the capital alone. It would also be interesting, in future research, to conduct interviews with a greater sample of non-ni-Vanuatu people, and with a greater sample of people with less familiarity with the country (for instance, adaptation consultants and multilateral development bank representatives) to allow for comparison.

This paper also contributes to the literature in that it attempts to close the gap between technical, policy-oriented papers (which may often be out of touch with community needs) and anthropologies of communities that describe, but rarely prescribe. While this is one small attempt to bridge this gap, there is an urgent need to further connect the divided disciplines of environmental anthropology and environmental policy on all climate-related issues, including climate-related migration. Both disciplines have valuable potential to contribute to the other. To study climate vulnerable communities without applying empirical findings to climate policy approaches—or worse, to create policy on climate-related migration without a thorough understanding of the interests or expectations of local communities—would be a lamentable waste of academic resources.

One of the first interviews I conducted in Port Vila was with a passionate ni-Vanuatu climate activist, whose quotes I have used throughout this paper. When I asked him about how he feels about the idea of migrating due to climate change, he responded in the following, halting manner:

> That issue, I mean, for me, personally, talking about migration because of climate […] that is something that is really, really, well for me it's really hard for me to […] For me, personally, I would say that I'm not going to move if there's a climate change event or impacts in my home. Because, you know, the place where I live is where I belong (Interviewee 2).

These words, and the hesitation behind them, perfectly encapsulate what it means to contemplate change-related migration in a small island state like Vanuatu. They also embody the sort of richness and complexity that can only be achieved by truly engaging with the expressed interests and concerns of the communities that face relocation. Without a fundamental understanding of this complexity, policy discussions for addressing climate-related migration are bound to be locally inappropriate and uninformed. Listening to perspectives in Vanuatu around the prospect of climate-related migration reveals communities that are reluctant to move, that regard losses to livelihood and culture with trepidation, and that are actively dedicated to empowerment and resilience. It also serves as a strong reminder that seeking out and centering the voices of these communities is a crucial component of creating sensible, effective policy relating to climate change.

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References

Allgood, L., & McNamara, K. (2017). Climate-induced migration: exploring perspectives in Kiribati. *Singapore Journal of Tropical Geography*, 38(2017), 370-385. https://doi.org/10.1111/sjtg.12202

Ash, J., & Campbell, J. (2016). Climate change and migration: the case the Pacific Islands and Australia. *The Journal of Pacific Studies,* 36(1), 53-72.

Barnett, J. (2017). The dilemmas of normalising losses from climate change: towards hope for Pacific atoll countries. *Asia Pacific Viewpoint*, (58)1, 3-13. https://doi.org/10.1111/apv.12153

Barnett, J., & Webber, M. (2012). Migration as adaptation. In J. McAdam (Ed.) *Climate change and displacement: multidisciplinary perspectives* (pp. 37-56). Portland & Oxford: Hart.

Barnett, J., & Campbell, J. (2015). *Climate change and small island states: power, knowledge and the South Pacific*. New York: Routledge.

Barnett, J., & O'Neill, S. (2012). Islands, resettlement and adaptation. *Nature Climate Change*, 2(1), 8-10. https://doi.org/10.1038/nclimate1334

Bedford, R. (1973). *New Hebridean mobility: a study of circular migration*. Canberra: Australian National University.

Bedford, R., & Campbell, J. (2013). Migration and climate change in Oceania. In E. Piguet & F. Laczko (Eds) *People on the move in a changing climate* (pp. 177 - 204). Dordrecht: Springer.

Betzold, C. (2015). Adapting to climate change in small island developing states. *Climate Change*, 133, 481-489. https://doi.org/10.1007/s10584-015-1408-0

Biermann, F., & Boas, I. (2008). Protecting climate refugees: the case for a global protocol. *Environment: Science and Policy for Sustainable Development*, 50(6), 8-17.

Bonnemaison, J. (1985). The tree and the canoe: roots and mobility in Vanuatu societies. *Pacific Viewpoint*, 25(2) 117-151.

Buggy, L., & McNamara, K. (2015). The need to reinterpret 'community' for climate change adaptation: a case study of Pele Island, Vanuatu. *Climate and Development*, 8(3), 270-280. https://doi.org/10.1080/17565529.2015.1041445

Byravan, S., & Rajan, S (2006). Sea level rise and climate change exiles: a possible solution. *Climate Policy*, 6, 247-252. https://doi.org/10.1080/14693062.2006.9685599

Campbell, J. (1990). Disasters and development in historical context: tropical cyclone response in the Banks Islands, Northern Vanuatu. *International Journal of Mass Emergencies and Disasters*, 8(3), 401-424.

Campbell, J. (2006). Traditional disaster reduction in Pacific Island communities. *GNS Science Report 2006/38*.

Campbell, J. (2012). Climate-induced community relocation in the Pacific: the meaning and importance of land. In J. McAdam (Ed.) *Climate change and displacement: multidisciplinary perspectives* (pp. 57-80). Portland & Oxford: Hart.

Campbell, J., & Warrick, O. (2014). Climate change and migration issues in the Pacific. Fiji: United Nations Economic and Social Commission for Asian and the Pacific / International Labour Organization.

Central Intelligence Agency (2014). Australia-Oceania: Vanuatu. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/print/country/countrypdf_nh.pdf.

Comes, M., Dubbert, M., Garschagen, M., Hagenlocher, M., Sabelfeld., Yew Jin Lee, U., Grunewald, L., Lanzendörfer, M., Mucke, P., Neuschäfer, O., Pott, S., Post, J. Schramm, S.,Schumann-Bölsche, D., Vandemeulebroecke, B., Well, T., & Birkmann, J. (2016). *World Risk Report*. Berlin & Bonn: Bündnis Entwicklung Hilft / ited Nations University - EHS.

Constable, A. (2016). Climate change and migration in the Pacific: options for Tuvalu and the Marshall Islands. *Regional Environmental Change*, 17(2017), 1029-1038

Craven, L. (2015). Migration-affected change and vulnerability in rural Vanuatu. *Asia Pacific Viewpoint*, 56(2), 223-236. https://doi.org/10.1111/apv.12066

De Souza, R.M., Henly-Shepard, S., McNamara, K., & Fernando, N. (2015). Re-framing island nations as champions of resilience in the face of climate change and disaster risk. *UNU-EHS working paper series*, 17. Bonn: United Nations University Institute of Environment and Human Security.

Docherty, B., & Giannini, T. (2009). Confronting a rising tide: a proposal for a convention on climate change refugees. *Harvard Environmental Law Review*, 33(2), 349-403.

Doherty, B. (2015). Labor champions plan to resettle Pacific climate change migrants. *The Guardian*, 10 November. https://www.theguardian.com/environment/2015/nov/11/labor-champions-plan-to-resettle-pacific-climate-change-migrants.

Donner, S. (2015). The legacy of migration in response to climate stress: learning from the Gilbertese resettlement in the Solomon Islands. *Natural Resources Forum,* 39, 191-201.

Falstrom, D. (2001). Stemming the flow of environmental displacement: creating a convention to protect persons and preserve the environment. *Colorado Journal of International Environmental Law and Policy*, 2, 1-19.

Farbotko, C., & Lazrus, H. (2012). The first climate refugees? Contesting global narratives of climate change in Tuvalu. *Global Environmental Change*, 22(2), 382-90. https://doi.org/10.1016/j.gloenvcha.2011.11.014

Gerrard, M.B., & Wannier, G.E. (2013). *Threatened island nations: legal implications of rising seas and a changing climate*. New York: Cambridge University Press.

Granderson, A. (2017). Value conflicts and the politics of risk: challenges in assessing climate change impacts and risk priorities in rural Vanuatu. *Climate and Development,* 1-14. https://doi.org/10.1080/17565529.2017.1318743

Hodgkinson, D., & Young, L. (2013). In the face of looming catastrophe. In M.B. Gerrard & G.E. Wannier (Eds.) *Threatened island nations: legal implications of rising seas and a changing climate* (pp. 299-336). New York: Cambridge University Press.

Hugo, G.J., & Bedford, R.D. (2012). Population movement in the Pacific: a perspective on future prospects. Wellington: Department of Labor.

Human Rights and Equal Opportunity Commission (HREOC) (2008). *Human rights and climate change background paper.* Australian Human Rights Commission. https://www.humanrights.gov.au/papers-human-rights-and-climate-change-background-paper.

Interviewee 1 (Employee at GIZ), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.

Interviewee 10 (Local NGO worker), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.

Interviewee 11 (Local NGO worker), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 12 (Policymaker in Department of Livestock), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 13 (Policymaker in Department of Local Authorities), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 14 (Policymaker in Department of Foreign Affaairs), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 15 (Policymaker in Vanuatu National Disaster Management Office), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 16 (Student and climate activist), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 17 (climate activist), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 18 (Scholar and employee at Vanuatu Cultural Centre), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 19 (International Organization for Migration representative), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 2 (International NGO worker and climate activist), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 3 (Representative of multi-organization civil society coalition), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 4 (Policymaker in Department of Energy), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 5 (International NGO worker), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 6 (Policymaker in Provincial Offices), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 7 (Professor at University of the South Pacific - Emalus Campus School of Law), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 8 (Policymaker in Department of Energy), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Interviewee 9 (NAB Technical Advisor), interviewed by Nikita Perumal, Port Vila, Shefa Province, Vanuatu, January 2016.
Kelman, I. (2008). Island evacuation. *Forced Migration Review*, 31, 20-21.
Kelman, I. (2010). Hearing local voices from small island developing states for climate change. *Local Environment*, 15(7), 605-619. https://doi.org/10.1080/13549839.2010.498812
Kelman, I., & West, J. (2009). Climate change and small island developing states: a critical review. *Ecological and Environmental Anthropology*. 5(1), 1-16.
Lazrus, H. (2012). Sea change: island communities and climate change. *Annual Review of Anthropology,* 41(1), 285-301. https://doi.org/10.1146/annurev-anthro-092611-145730
McAdam, J. (2012). *Climate change, forced migration, and international law*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199587087.001.0001
McAdam, J., & Loughry, M. (2009). We aren't refugees. *Inside Story*, 30 June. http://insidestory.org.au/we-arent-refugees.
McNamara, K.E., & Gibson, C. (2009). 'We do not want to leave our land': Pacific ambassadors at the United Nations resist the category of 'climate refugees'. *Geoforum*, 40(3), 475-483. https://doi.org/10.1016/j.geoforum.2009.03.006
McNamara, K.E., & Des Combes, H.J. (2015). Planning for community relocations due to climate change in Fiji. *International Journal of Disaster Risk Science*, 6(3), 315-319.

McNamara, K.E., & Prasad, S.S. (2014). Coping with extreme weather: communities in Fiji and Vanuatu share their experiences and knowledge. *Climatic Change,* 123(2), 121-132. https://doi.org/10.1007/s10584-013-1047-2

Monson, R., & Foukona, J. (2014). Climate-related displacement and options for resettlement in Solomon Islands. In S. Leckie (Ed.) *Land solutions for climate displacement* (pp. 291-316). New York: Routledge.

Mortreux, C., & Barnett, J. (2009) Climate change, migration and adaptation in Funafuti, Tuvalu. *Global Environmental Change*, 19(1), 105-12. https://doi.org/10.1111/1477-8947.12082

NAB (2016). NAB Portal. *National Advisory Board on Climate Change and Disaster Risk Reduction*. http://www.nab.vu/.

National Oceanic and Atmospheric Administration (2016). *U.S. climate resilience toolkit*. National Oceanic and Atmospheric Administration, 1 March. https://toolkit.climate.gov/get-started/overview.

Nurse, L., McLean, R., Agard, J., Briguglio, L., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E., Webb, A., Campbell, J., Chadee, D., Maharaj, S., Morin, V., Oldenborgh, G., Payet, R., & Scott, D. (2014). Small islands. In V.R. Barros et al. (Eds.) *Climate change 2014: impacts, adaptation, and vulnerability. Part B: regional aspects. contribution of Working Group II to the fifth assessment report of the Intergovernmental Panel on Climate Change* (pp. 1613-1654). Cambridge, UK & New York: Cambridge University Press.

Petrou, K. (2017). Before, it wasn't like this…: longitudinal research and a generation of continuity and change in rural-urban migration in Vanuatu. *Asian and Pacific Migration Journal*, 26(1), 31-55. https://doi.org/10.1177/0117196816683405

Petz, D. (2013). Neglected displacement: human mobility in pacific disaster risk management and climate change adaptation mechanisms. Geneva: Norwegian Refugee Council/International Displacement Monitoring Centre.

Rakova, U., Patron, L., & Williams, C. (2009). How-to guide for environmental refugees. *Our World*, 16 June. https://ourworld.unu.edu/en/how-to-guide-for-environmental-refugees.

Scott, J. (1998). *Seeing like a state: how certain schemes to improve the human condition have failed*. New Haven: Yale University Press.

Siméoni, P., & Ballu, V. (2012). Le mythe des premiers réfugiés climatiques : mouvements de populations et changements environnementaux aux îles Torrès (Vanouatou, Mélanésie). *Annales de géographie*, 685,(3), 219-241. https://doi.org/10.3917/ag.685.0219

Solomon, M., & Warner, K. (2013). Protection of persons displaced as a result of climate change: existing tools and emerging frameworks. In M.B. Gerrard & G.E. Wannier (Eds.) *Threatened island nations: legal implications of rising seas and a changing climate* (pp. 243-298). New York: Cambridge University Press.

Tonkinson, R. (1985). Forever Ambrymese? Identity in a relocated community, Vanuatu. *Pacific Viewpoint*, 26(1), 139-159.

UNDP (2014). *Risk governance assessment report: strengthening climate and disaster risk governance in Vanuatu*. Port Vila: Government of Vanuatu.

United Nations High Commissioner for Refugees (UNHCR) (1951). Convention and protocol eelating to the status of refugees. *UNHCR*. http://www.unhcr.org/3b66c2aa10.html.

Vachette, A. (2016). *Networked disaster governance in Vanuatu: the anatomy of an inclusive and integrated system to build resilience in a small island developing state*. Doctoral dissertation, James Cook University.

Warrick, O.C. (2011). *Local voices, local choices? vulnerability to climate change and community-based adaptation in rural Vanuatu*. Doctoral dissertation, University of Waikato.

Webb, J., Vorbach, D. Boydell, E., Mcnaught, R., & Sterrett, C. (2015). Tools for CBA: lessons from NGO collaboration in Vanuatu. *Coastal Management*, 43(4), 407-423. https://doi.org/10.1080/08920753.2015.1046807

Williams, A. (2008). Turning the Tide: Recognizing Climate Change Refugees in International Law. *Law & Policy*, 30(4), 502-529. https://doi.org/10.1111/j.1467-9930.2008.00290.x

World Bank (2016). Vanuatu. *World Bank DataBank – World Development Indicators*. http://databank.worldbank.org/data/reports.aspx?source=2&country=VUT

Wyett, K. (2014). Escaping a rising tide: sea level rise and migration in Kiribati. *Asia and the Pacific Policy Studies*, 1, 171-185. https://doi.org/10.1002/app5.7

Zetter, R. (2010). The meaning and importance of land. In J. McAdam (Ed.) *Climate change and displacement: multidisciplinary perspectives* (pp. 131-150). Portland & Oxford: Hart.

Adapting to climate change impacts in Yap State, Federated States of Micronesia: the importance of environmental conditions and intangible cultural heritage

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ABSTRACT: In western Micronesia, sea levels are rising at three to four times the global average, saltwater intrusion is impacting freshwater supplies and food production, and local cultures are being forced to respond. Yap State, Federated States of Micronesia (9.5N, 138E), consists of a cluster of four main islands (MI) and 14 coral atolls and smaller outer islands (OI) spread over 400,000 km^2 of ocean. This paper examines three aspects of Yap State's adaptive capacity to climate change impacts: 1) differences in environmental conditions between the MI and OI; 2) relevant features of the MI's cultural heritage; and 3) relevant features of OI's cultural heritage, including values and practices surrounding the *sawei* system relationship. Cultural support networks in both the MI and OI will almost certainly be relied upon to lessen the severity of climate change impacts, perhaps especially as more OI residents relocate to the MI. More research is needed to document how features of intangible cultural heritage that create and maintain social resilience in Yap State will shape residents' adaptive capacity to climate change.

Keywords: adaptive capacity, atolls, climate change, cultural heritage, Pacific, Small Island Developing States (SIDS), Yap

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Introduction

Small Island Developing States (SIDS) are often characterized as particularly vulnerable to the impacts of climate change because of their small populations, limited resources, remoteness, susceptibility to natural disasters, and fragile ecosystems (Nurse et al., 2014; United Nations, 1994). In the tropical western Pacific, sea levels are rising at a rate three to four times the global average (i.e., 10-12 mm/yr vs. 3.3 mm/yr, respectively) (Cazenave & Remy, 2011), saltwater intrusion is impacting freshwater supplies and food production (Hezel, 2009; Ruegorong et al., unpublished data, 2016; Werner et al., 2017), and beach erosion is a major concern (Hezel, 2009; Keener et al., 2012). Even if rates of sea-level rise in the western Pacific decrease within the next few decades to more closely match global averages (Timmermann et al., 2010), climate change impacts on SIDS are projected to continue through the 21st century (Nurse et al., 2014). Islanders' response to these impacts will strongly influence the long-term viability of human populations and cultures on tropical western Pacific islands.

A location's vulnerability to climate change is typically defined (e.g., Smit et al., 1999; United Nations Framework Convention on Climate Change [UNFCCC], 2005) as a function of exposure to impact, sensitivity to impact, and adaptive capacity (i.e., the potential, capability, or ability of a system to adapt to climate change stimuli or their effects or impacts). Such a notion is notoriously difficult to define for small islands, in part because of heterogeneity in island geomorphology, culture, ecosystems, and populations (Nurse et al., 2014). For example, Barnett and Campbell (2010) summarize high-elevation islands' exposure to climate change impacts as including coral reef bleaching, flash flooding of streams, and damage from sea-level rise and storms, especially in coastal areas due to concentrations of population and infrastructure. But, high-elevation islands, because of their greater variety and amount of natural resources, are considered less sensitive to climate-related changes than are low-elevation islands (i.e., atolls). Conversely, the latter's extremely small size, coralline soils, and shallow freshwater lenses may result in their being uninhabitable in the next few decades (e.g., Nunn, 2013; Storlazzi et al., 2015). Atoll sensitivity is especially acute in combination with tidal extremes and storm surges, resulting in fresh water shortages and possible human health problems.

Despite general agreement that Pacific islands share many characteristics, there is a paucity of accurate, relevant, and island-specific data (either modeled or empirical) available to quantify the range of unique vulnerabilities of small islands to climate change. Even defining one aspect of vulnerability, for example adaptive capacity, is a complicated task. Park et al. (2012) argue for the need to integrate scientific knowledge, local perceptions of vulnerability, and an accurate understanding of the local ability to successfully respond. Nurse et al. (2014) take this a step further by calling for a consideration of the culturally specific factors driving these local perceptions and abilities. Assessments of adaptive capacity for indigenous island societies may be fundamentally incomplete if they fail to account for the enduring localized cultural adaptations that have developed in response to specific social and ecological challenges. What is needed is a focused approach that acknowledges the uniqueness of individual island cultures and their specific environmental complexities (Allen, 2015).

Yap State, one of four member states (along with Chuuk, Pohnpei, and Kosrae) of the Federated States of Micronesia (FSM) (Figure 1), demonstrates the importance and challenge of considering the full context of resources and pressures when assessing adaptive capacity within a multi-island association. Yap State consists of a cluster of four high islands (Yap's Main Islands, or MI, and often referred to in the literature as 'Yap Proper') and fourteen atolls and small islands (Outer Islands, or OI) distributed over 400,000 km^2 of ocean. The MI occupy 9,300 ha with a maximum elevation of 174 m, and are so tightly grouped that they effectively operate as a single land mass. They serve as the centre for virtually all economic and governmental activity within Yap State, and are the location of Yap's banks, hospital, two-year college, and international airport. The OI atolls (e.g., Eauripik, Elato, Faraulep, Gaferut, Ifalik, Lamotrek, Ngulu, Olimarao, Piagailoe, Pikelot, Sorol, Ulithi, Woleai, and Satawal) and one raised coral small island (e.g., Fais) collectively occupy 2,600 ha, with the atolls having a maximum elevation of 5 m. In 2010, Yap State's total population was 11,377 with approximately 65% living on the MI (FSM Division of Statistics, 2012). Populations in 2010 within individual OI atolls and islands ranged from 26 in Ngulu to 975 in Woleai (FSM Division of Statistics, 2012).

This paper examines three related influences on Yap State's adaptive capacity to climate change impacts: the heterogeneity of the islands' environmental conditions, the relevant aspects of cultural heritage specific to the MI, and aspects specific to the OI, including values and practices surrounding the *sawei* tribute system relationship between Main Islanders and Outer Islanders. This analysis is based on an examination of relevant literature, as well as the authors' extensive field experience in Yap State beginning in 2000. Research from both authors has included close collaborations and personal interviews with local residents, government officials, and traditional leaders on topics ranging from environmental management to the preservation of cultural heritage.

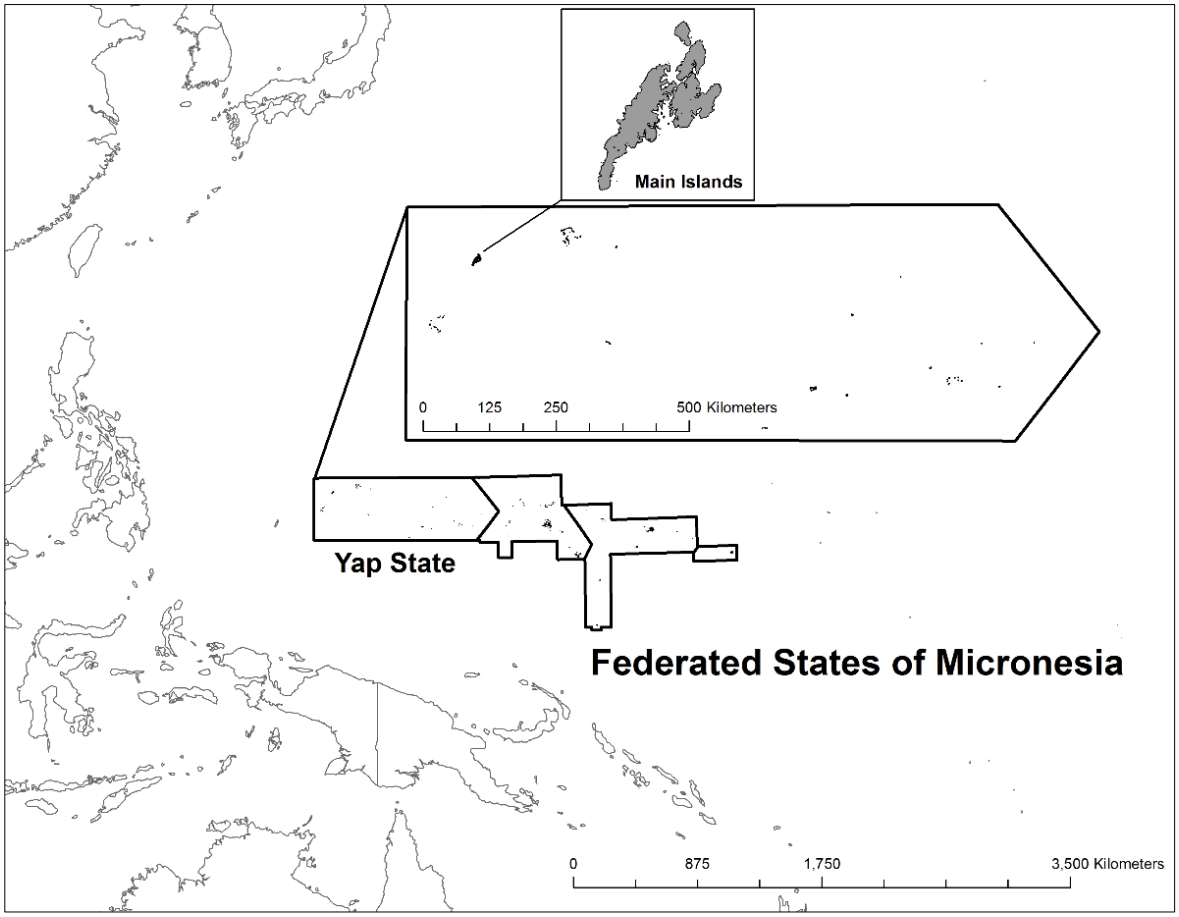

Figure 1: Map showing the Federated States of Micronesia and Yap State in the Pacific.
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In addition to climatic threats, it is worth noting that FSM islanders also face an uncertain economic future. The USA maintains a defining role in the economic trajectory of the islands through a Compact of Free Association (COFA), originally signed in 1986, then amended in 2003, to support six vital program areas: education, health, infrastructure, public-sector capacity building, and the environment. While the COFA economic assistance is obviously beneficial in many ways, it has also created a relationship of dependency that cannot be ignored. The FSM currently receives approximately US$130 million per year from the USA ('US Relations with the FSM', 2017), or approximately 58% of total national revenues. Roughly two-thirds of employees nationwide work for the government (CIA World Factbook, 2017), with very few alternative options. As amended in 2003, direct financial assistance to the FSM, delivered through annual sector grants, will end in 2023. Prior to that date, an increasing percentage of USA aid funds will be placed in a trust, which after 2023 is intended to serve the same purpose as prior grant assistance (Gootnick, 2016). The long-term self-sufficiency of this financial structure is doubtful. A 2016 Department of Interior financial review (US Department of Interior, 2017) states a "low probability" that the trust fund status after 2023 will be equivalent to fiscal year 2023 grant aid. Thus, the FSM must navigate simultaneously the uncertain impacts of climate change and economic change.

Yap State environmental conditions

Sharp differences across Yap's islands exist in topography, geology, and the subsequent characteristics of fresh-water storage, vegetation, and food production. Yap's MI are the peaks of an accretionary wedge located on the easternmost margin of the Philippine plate, and are surrounded by a broad fringing reef system. The underlying geology is mostly metamorphic rock and weathered volcanic breccia (Nedachi et al., 2001). Soils in the uplands are deep and have developed in residuum from volcanic materials and schists; the coasts are dominated by mangrove forests and alluvial muck soil (Smith, 1983). The islands have robust groundwater reserves, sufficient to pump approximately 1.5 million litres/day (Belt et al., 1982), which is estimated to be more than sufficient to serve a hypothetical population of at least 9,300 (Shade et al., 1992). The vegetation of the MI has been highly modified by human activity, and other than mangroves, little native forest remains; approximately 40% of the MI is covered in some type of forest (including upland, swamp, and mangrove), 26% in agroforest, 6% in secondary vegetation, and 28% in non-forest use (Falanruw et al., 1987). The inhabited atolls of the OI, on the other hand, have coralline soils and comparatively less diverse topography and vegetation. Residents of the OI must rely on shallow freshwater lenses and rainfall for drinking and terrestrial food production needs.

As might be expected, differences in local environments have led to different traditional food production strategies across Yap State. The MI developed an intensive approach that functionally divided the island into habitat zones by which rainfall is collected at the ridge, then routed and filtered through biotic communities successively less tolerant of siltation, until it is routed into near-shore streams and, ultimately, a reef channel (Falanruw, 1990, 1993). In this system, higher elevation forests transition first to grasslands with tilled ditch beds (e.g., sweet potatoes), then to shifting gardens (e.g., yams) in open canopies, then to intermittent mixed gardens in forested areas (e.g., breadfruit, *Colocasia esculenta* taro, herbs), and finally to coastal tree gardens and taro patches (e.g., *Cyrtosperma merkusii* [Hassk.] Schott, also known as *Cyrtosperma chamissonis* [Schott]) and 55 other food species (Falanruw, 1993; Manner & Clark, 1993). This approach, though requiring careful management, proved to be sustainable over Yap's history (Falanruw & Ruegorong, 2015). Reef fishing provided additional food supplies, with overexploitation prevented by strict rules regarding site access and catch limits rooted in Yap's traditional resource tenure system (Kronen & Tafileichig, 2008).

Traditional agricultural production across the OI is similar to that in other Pacific atolls. Agroforestry is arranged in zones reflecting gradations in exposure to saltwater, saline spray, and availability of freshwater (Manner, 1993a). On larger islets, the coastal strand is dominated by coconut woodlands and agroforests (approximately 70% of total area), with mixed coconuts and breadfruit agroforests slightly more inland (approximately 30% of total area), and the islets' interiors are typically dominated by (salt intolerant) breadfruit agroforest (less than 10% of total area) (Manner, 1993a). Both *Colocasia esculenta* and *Cyrtosperma merkusii* (Hassk.) Schott are planted in pits located near the centres of larger islets where the freshwater lens is thickest (Manner, 1993b). Additional foods come from a range of tree crops (e.g., pandanus, banana, mango, and papaya), root crops (e.g., two additional genera of taro: *Alocasia* and *Xanthosoma*; cassava, and arrowroot), and vegetable crops (e.g., beans, peppers, cabbage, etc.) (Manner, 1993a). Nearly all food production requires very careful attention to planting location and method, limited by a lack of organic matter and plant sensitivity to salinity (Manner, 1993b; Stone et al., 2000).

Observed climate changes for the FSM include increasing air and sea surface temperatures, increasing numbers of tropical storms, and increasing ocean acidification (Australian Bureau of Meteorology and CSIRO, 2014), but quantitative documentation of climate-related impacts across Yap State are sparse. Though precipitation across Yap is highly correlated with ENSO occurrence and intensity (PICEP, 2014), there has been no discernible change in Yap's average monthly precipitation since 1952 (Australian Bureau of Meteorology

and CSIRO, 2014). On the MI, a 2013-2014 survey conducted in 117 of 120 villages indicates that saltwater intrusion, though highly spatially variable, is reported to be impacting taro patches up to, and sometimes exceeding, 5 m elevation (Ruegorong et al., 2016). The sensitivity of atolls, in general, to saltwater intrusion and drought is well documented (e.g., Chui & Terry, 2015; Terry & Falkland, 2009; Werner et al., 2017). Of particular concern is the coincident occurrence of extreme high tides, rising sea levels, and strong storm surges, potentially leading to the overtopping of atolls by saltwater (Werner et al., 2017). Within Yap State, saltwater intrusion during such an event in 2007 led to the mortality of 90% of the taro crop on the islet of Falalop, Ulithi atoll, and 75% of the taro crop on the islet of Falalop, Woleai atoll (Hezel, 2009). Thus, even without a full documentation of local-scale climate changes, it seems clear that atolls will experience the impacts sooner and more severely than will the higher-elevation MI.

Potential adaptation responses related to these impacts will also differ between the MI and OI. The MI have more land, more productive soils, and a bigger and more productive reef. Indeed, nearly all of Yap can be utilized to produce some type of traditional food (Falanruw, M., pers. comm.). In addition, the MI will benefit from having more money, more water, greater access to external resources (e.g., emergency supplies, technical, financial, and intellectual), and more political strength. The OI face an unsurprisingly narrower and less flexible path for adaptation. Some food production methods can utilize raised beds to avoid saltwater intrusion, and indeed this is already being seen in some OI locations (Falanruw, M., pers. comm.). While this may be an option for vegetable crops and some species of taro, it is not feasible for tree crops.

Another response available to OI residents is migration to the MI. OI to MI migration did increase from 1.3% to 2% of the OI base population between 1994 and 2000 (Yap Branch Statistics Office, 2002), with Alkire (1993) identifying access to education, healthcare, and employment as key motivations at the time. According to one key OI stakeholder, these remain more important than climate change-related concerns as to why OI residents might relocate, though he feels this is likely to change as climate impacts become more pronounced (Raigetal, L., pers. comm.). While OI populations on the MI seem clearly to be growing (i.e., four official settlement locations and other unofficial ones), government census data show the OI population residing on the OI actually increased by an annual rate of 0.4% between 2000 and 2010 (FSM Division of Statistics, 2012). Because of this uncertainty, ethnographic and demographic research specifically addressing why and to what extent OI residents are migrating is clearly needed to anticipate future social, economic, and environmental impacts.

Adaptive elements of cultural heritage in Yap State

The islands of Yap State have been occupied for perhaps over 2,500 years (Dodson & Intoh, 1999). During that period, residents developed a complex and sustainable approach to resource management and social stability. Nunn et al. (2017) argue that historic Yapese stonework construction strategies were adaptive responses to shifting sea levels due to climatic warming and cooling events over the last millennium. Nunn et al. (2017, p. 10) primarily focused on tangible elements of Yapese heritage, e.g., Yapese men's houses (*faluw*) and other stoneworks such as those used with taro gardens (*mu'ut*), and "intangible ones that articulate a determination to resist attempts by 'Nature' to prevent Micronesians from continuing to occupy island coasts." Their study is noteworthy because it provides a detailed examination linking cultural heritage and a people's adaptive capacity to respond to climate change impacts. It is also valuable in its focus on Yap State specifically.

We seek to complement works such as Nunn et al.'s (2017) by also emphasizing the position that intangible elements of indigenous Micronesian culture "perform in a great variety of adaptive ways" (Petersen, 2009, p. 226) that have long aided survival in such a vulnerable environment. Along with examining the traditional ecological knowledge and

technological ingenuity islanders used (and perhaps still use) to mitigate impacts of climate events (e.g., Nunn, 2007), we feel elements of intangible cultural heritage that specifically help to create and maintain a high level of social resilience are equally important in assessments of adaptive capacity. While they may be disappearing for many reasons, traditional patterns of support are still present in varying degrees in Yap State (Krause, 2016) and certainly throughout the world in societies where group identity is valued more than individuality (c.f., Lazrus, 2015). Kinship systems, traditional sociopolitical organizations, chiefly redistribution of resources, and a variety of other forms of local knowledge that provide protocols for social interactions and practices are all strands of web-like social 'safety-nets'. Both authors have witnessed these practices following Typhoon Sudal (2004) and Typhoon Maysak (2015). The theory that cultural patterns take shape in response to ecological constraints is certainly not new and is most developed in Julian Steward's (1955) cultural ecology paradigm. Steward's materialist approach provided a groundbreaking model at the time for identifying similarities between cultures inhabiting similar environments. Our arguments here clearly echo the cultural ecology framework but differ significantly when avoiding the more generalizing tendencies common to early applications of Steward's theories.

Culturally, Yap State is best understood as comprised of two separate indigenous groups whose ancestors settled the islands at different times and most likely from different origins. Main Islanders are culturally 'Yapese' and speak a distinct Yapese language. OI residents share a 'Carolinian' cultural heritage, which is the term given to describing the indigenous inhabitants of the Caroline Islands (as well as the remote southwest atolls of Palau) with languages that are included within the Carolinian linguistic family (Ellis, 2012). To those unfamiliar, the Yapese and Carolinian cultures may appear very similar, but there are significant differences that stand out and make it very clear that Main Islanders and Outer Islanders are two distinct groups. In turn, these distinctions also factor into considerations of how both groups might rely upon traditional cultural patterns when confronting the various impacts of climate change.

Relevant features of MI cultural heritage

The traditional Yapese (i.e., MI) sociopolitical system is still largely in place and has its roots in the social values heavily influenced by the MI's past population pressures (Lingenfelter, 1975). These values were necessarily built upon the material needs of the society. On a small cluster of remote islands, perhaps nothing is more important than the efficient, sustainable use of land. Land on the MI thus holds a central importance in the daily lives of residents, both materially and symbolically. Egan (2004, p. 22) captures this importance by stating simply, "Land sustains life. Irrigated taro patches, well-tended yam gardens, and groves of coconut, betel, and breadfruit trees have long provided the people […] with the means of their subsistence."

The MI sociopolitical system is hierarchical in organization, with a differentiating status or rank potentially assigned to every family member, estate, and village. Status is determined by, and primarily structured around, patrilineal ties to ancestral landed estates, known as *tabinaw* (which define the protocols of access to estate resources). Women are members of the estates they are born into, but they eventually marry into their husband's estate. The most significant areas within the *tabinaw* are the *daef*, "the stone platform upon which rests the central dwelling of the estate head" (Egan, 2004, p. 23). As Marksbury (1979) notes, a *tabinaw* is not simply a parcel of land, but a collection of parcels of land associated with a *daef*. Each of these parcels has its own productive and social value for the *tabinaw*, and often several parcels, such as taro patches, are found some distance away from other pieces of land associated with the estate. There exist well-defined protocols for who has rights to various parcels of land and reef tied to estates and villages so that even lower-ranked groups without resources of their own can access these areas if needed. These values inform the protocols and patterns of Yapese social organization to emphasize the importance of ensuring that the basic needs of

all are met. They also help to bolster social resiliency, which in turn strengthens the adaptive capacity to respond to impacts associated with climate change on the islands.

While patrilineal inheritance and patrilocality form the main threads of connections, matrilineal clans are also very important strands of the Yapese webs of support. Everyone is born into their mother's clan, and "Clan membership formed a basic part of each person's social identity and indicated which historic group he or she is a part of" (Labby, 1976, p. 15). Labby's analysis interprets Yapese kinship as being a "social system arising from ongoing histories of transactions between successive exogamous matrilineal clans negotiating rights to landed estates through an exchange of service, labor, respect, and care" (Throop, 2010, p. 42). The exogamous flow of clan members through estates has meant that "People of one clan establish themselves as part of particular estate in one generation, only to pass the estate on to people of other clans in the next generation, even as their own clan progeny have left and found land elsewhere" (Egan, 2004, p. 25). This system is complex, but also highly effective at creating a wide but tightly woven web of support throughout the main islands (Krause, 2016). As with the matrilineal Carolinian culture of the OI discussed later, clan relatives provide an important source of obligated assistance on the MI when needed.

Many of the adaptive elements of the MI's intangible cultural heritage can be seen as shaped by the struggle to survive when resource availability was stressed due to demand pressures. Estimates of the MI's maximum population before European contact in 1525 range from 25,000 (Hunter-Anderson, 1983) to 40,000 (Underwood, 1969). This is at least three, and maybe even more than five, times the current population. Sherwood Lingenfelter, author of one of the seminal cultural anthropological assessments of the MI, states that Yapese culture "adapted itself to this condition of intensive population, and was organized politically and socially to operate with a large population base. (*Present social values reflect these past conditions in which resources were extremely scarce and competition to obtain them intense*)" (Lingenfelter, 1975, p. 6; emphasis added). The social values that took form amid the harsh realities mentioned above endure to present day (see Krause, 2016; and especially Throop, 2010).

Though the current population is significantly smaller than past maximum levels, basic social norms and values remain firmly in place. For example, respect (*liyeor*) is a key value that Yapese see as fundamental to their social order (Krause, 2016). As one local mentioned during a 2014 interview, living on Yap is "like being on a small boat in the middle of the ocean with people you have to get along with" (Krause, 2015, p. 59). Another central value is suffering (*gaafgow*), which reflects, among other things, the struggle for survival and the hard work expected of individuals in this collective struggle (Throop, 2010). This core value also reveals the deep respect Yapese hold for ancestors who lived and died during many tragic periods when they faced starvation and extreme hardships. Memorialized in chants and dances, stories of suffering during Japan's Second World War military occupation or others of the aftermath following major destruction from typhoons live on as they are retold to newer generations. The many accounts of enduring the suffering of past hardships, struggles to survive, and eventually rebuilding their lives provide a strong oral tradition of resiliency which cannot be ignored in the analysis of Yap's adaptive capacity to respond to current and future climate change related threats.

Preserving elements of intangible cultural heritage associated with the knowledge and protocols that reaffirm the traditional Yapese sociopolitical order is still a priority on the MI (Krause, 2016). Risking simplification, it is respect (*liyeor*) and knowing one's obligations (as defined by your estate and matriclans) within the family, within the village, and throughout the islands that is of vital importance to preserve for many Main Islanders. Krause (2016) concluded that the fear of losing these parts of their heritage is especially worrisome since they are the strands that hold together their strong webs of support. He posits that the anxiety fueling Main Islander discourse on cultural heritage preservation may be resulting from their transition from a traditional, subsistence-based lifestyle (based in values of reciprocity, redistribution, and care for all) into a modern (but uncertain) market economy where these

communal values are less important. If it is true that Main Islanders are prioritizing the preservation of adaptive features of their culture that create and maintain a system of built-in obligations toward one another for the common good of all, these same intangible forms of heritage are likely to hold value in helping to mitigate vulnerabilities to climate change impacts as they become more observable and pressing.

Relevant features of OI cultural heritage

One of the most significant adaptive features within Carolinian cultural heritage is its matrilineal descent system, organized around numerous exogamous matriclans dispersed throughout the islands. This system is held together through a shared cosmology in which clan lineages directly link present populations to their ancestral origins. Petersen (2009, p. 226) notes, "Micronesian matrilineal clans and lineages perform in a great variety of adaptive ways." These cultural features facilitate resiliency against catastrophic events such as major typhoons that can temporarily wipe out essential resources on low-lying islands. This is largely because dispersed matriclans provide direct linkages between clan relatives scattered hundreds of miles throughout the numerous habitable islands in the region. In effect, were a typhoon to destroy food resources and available freshwater supplies on an island, affected residents would be able to sail to neighbouring islands and seek refuge and assistance from their fellow clan members, who would be obligated to take them in.

Another important cultural feature among Carolinian groups (and, indeed, throughout the Pacific, including the main islands of Yap) is the widespread practice of adoption. Within Micronesia, Marshall (1999) concludes that on many islands, half or more children are adopted. Rubinstein (1979) calculated a 92% adoption rate on the Yapese outer island of Fais. As with the matrilineal descent system, the high prevalence of adoption on the islands can be viewed as strategically adaptive to the material demands present for small-island societies. While noting that adoptions on the outer islands of Chuuk and Yap State primarily occur within communities on the same islands, Rauchholz (2012, pp. 130-131) adds that adoption has been a "means of establishing connections to other islands to provide an additional source of support in times of need […] [and] these ties were often crucial for survival when storms destroyed an island and survivors needed to relocate." Furthermore, along with establishing and maintaining social bonds between families and groups and providing flexibility in the passing down of land rights, the accepted practice of adoption also makes it easier for local populations to sustainably manage the production, distribution, and consumption of their very limited resources. If a household does not have enough children to help with current and future subsistence activities, they can seek to add family members through adoption. Similarly, if resources are being strained because a household is too large, through adoption, family size can be adjusted to a more sustainable level. As Rauchholz (2012, p. 129) thus observes, "residence patterns of adopted children generally reflected what islanders viewed as being optimal ways of fulfilling everyone's needs." The flexibility manifested in Carolinian cultural heritage through lineage and descent patterns, adoption practices, and many other interconnected intangible features such as traditional navigation knowledge, must be considered when assessing local adaptive capacities to climate change impacts.

The sawei *system*

While culturally distinct, the Main Islanders and Outer Islanders in Yap State share a deep, centuries-old relationship with enduring connections. Oral histories from both cultures depict a relationship that led some early scholars (see Petersen, 2000, for debates on this subject) to conclude a 'Yapese Empire' once existed, in which the MI's sphere of power extended vast distances to the east, and Outer Islanders were subordinate to Main Islanders. While this characterization has been qualified (Petersen, 2000, 2009), there are interconnecting features of Yapese and Carolinian cultural heritage linking the two groups that arguably developed as adaptations for survival in response to the extreme environmental vulnerabilities that have

long existed on their islands (Petersen, 2009). A prime example is the *sawei* system, which historically existed as a "bicultural system of tribute offerings, gift exchange, and disaster relief" between MI and OI cultures (Hunter-Anderson & Zan, 1996, p. 1). Though the structured tribute canoe processionals defining the *sawei* system were halted decades ago, the institution's legacy as it once was, still shapes the relationship between MI and OI people.

The former practice of *sawei* can be seen as an adaptation of mutual reciprocity between and among groups of people. The practice involved hundreds of miles of voyaging from affiliated islands as far away as Namonuito, Pulap, and Houk (within Chuuk State territory today). Following strict protocols, voyaging canoes stopped along a series of other islands, which incrementally joined the caravan of canoes, tribute, and people sailing to the MI to present their offerings to the two traditionally affiliated villages of Gachpar and Wonyan (in Gagil Municipality). Having ceased over a century ago under the German administration, the *sawei* system provided these villages added status within the MI political order through the acquisition by their chiefs of various forms of prestigious tribute such as *lavalavas* (i.e., handwoven rectangular pieces of fabric originally made from banana fibres) and rare shells (which in turn became high-valued items within the traditional MI exchange system). In exchange for their fealty and proper observance of customary tribute protocols, the OI visitors were presented valuable items unavailable on their resource-poor islands. Along with numerous types of needed foods, they were also given items such as lumber, tools, imported manufactured items, and pigments and turmeric, which had ceremonial value (Hunter-Anderson & Zan, 1996).

It is natural to assume that in hierarchical societies that have strictly defined class distinctions, groups such as the Outer Islanders who are among the lowest in ranking in the Main Islander hierarchy would be much more vulnerable to crises, which push resource scarcity to its limits. This does not appear to be the case in Yap State when considering the adaptive features of cultural heritage found in such forms as the *sawei* in the past and other extant cultural patterns presented above. Once again, the values upon which the traditional society was built have formed a society that strives to ensure everyone obtains what they need to survive. As one of the Yapese participants in Krause's (2016, p. 346) study puts it:

> The [Yapese Main Island] system is structured in a way that nobody is left behind. Nobody has become homeless because nobody can take care of that person. No child is left without somebody to care for or to look after the interests of his wellbeing and other things.

This view toward the care of everyone also extends to the Carolinians who have at times been dependent upon assistance from Main Islanders. Krause (2016) notes in his research that Main Islanders often describe their relationship to the Outer Islanders as being symbolically equivalent to that of parents towards their children. As told to Krause, the 'parent' villages of Gachpar and Wonyan (more specifically, it is certain estates within these villages which hold the title) are obligated to help their 'children' from the OI when assistance is requested. This obligation reportedly even supersedes that toward their natal families. And while it is impossible to quantify today how significant *sawei* protocols of obligatory support actually were so long ago, anthropologists have generally concluded that "in terms of value or quantity of things exchanged, the Outer Islanders received from the Yapese far more than they gave" (Hunter-Anderson & Zan, 1996, p. 4). For those Carolinians affiliated with the practice, as a customary "insurance policy for survival" (Alkire, 1977, p. 52) the *sawei* system thus widened the base of accessible resources in times of need even further than the already present chiefly redistribution, matrilineal clans, and extended kin networks.

Conclusion

Four main points arise from this study. First and fundamentally, this study affirms the notion that to fully understand the adaptive capacity of small islands to the impacts of climate change, it is critical to examine each island's specific geological, ecological, socioeconomic, and cultural environments. This reinforces the conclusions of researchers (e.g., Allen, 2015; Farbotko & Lazrus, 2012; Stratford et al., 2013) that SIDS in the Pacific differ in their perceptions and responses to vulnerability and food insecurity, even if they share commonalities in their isolation, small size, and other resource constraints. Small island cultures, over the millennia of their existence, have had to continually (and quickly) develop sustainable responses to a dynamic environment, the most recent example of which is ongoing climate change. For these reasons, the vulnerabilities and adaptive capacities within the separate islands of Yap State must be seen as deeply rooted in the environmental and cultural components of their shared heritage. Allen's (2015, p. 1341) conclusions following an examination of Malo Island (Vanuatu) are equally valid for Yap State: "[Islanders' responses to climate change] demonstrate the importance of […] adaptive capacity of traditional practices and institutions […] to the sustainability of social-ecological systems."

Indigenous OI and MI cultural groups of Yap State have developed complex protocols relating to resource management, social structure, and land tenure, as well as intra- and inter-island norms of reciprocity. Inter-family and inter-village support networks promote social resilience, aiding adaptive capacity to environmental and other pressures. On Yap's MI, the interweaving of matrilineal and patrilineal rights and obligations tied to food production and exchange can mitigate the localized impacts of sea-level rise in vulnerable coastal villages. Main Islander views of climate change are thus tempered by traditional (and unwritten) rights to other land and food production mechanisms.

This strong communal support system makes precise evaluation of the MI's adaptive capacities problematic. Also complicating matters is the reality that modern threats (e.g., economic, political) and opportunities (e.g., scientific) may transform the cultural ecology of the MI with regards to how residents adapt to and manage environmental threats. One example of this is the recent effort by MI residents to integrate traditional food production knowledge with modern geospatial science and technology to develop a watershed–based approach to food security.

Second, if climate change continues to stress the habitability of Yap's OI, these residents will very likely rely upon traditional support networks and relocate to Yap's MI, which have a greater capacity to adapt given their more diverse environmental conditions. It has been over a century since the formal inter-island voyages and exchanges that defined the *sawei* system have taken place. However, the values and protocols embedded within the *sawei* relationship between the Yapese and their Carolinian neighbors, including those that facilitate the movement of people and goods between the OI and MI, are still influential today. The *sawei* relationship, even more than modern politics, dictates that Carolinians are not treated as foreigners. This has made it easier for Carolinians choosing to move to the MI for economic and educational opportunities, healthcare, and access to a variety of government services. This same environment of support will surely be depended upon as more Carolinians relocate to the MI due to continued climate change impacts.

Third, it is difficult to foresee the range of social, economic, and ecological impacts that increased migration from the OI to the MI will have upon Yap State. As the OI become less habitable, more and more OI residents will become permanent residents on the MI, not temporary visitors as some are today. They will be without land (therefore without traditional social status), without jobs or income, and hungry. If Yapese Main Islanders see themselves as having a near parental responsibility to OI residents, the question also arises of how this symbolic view towards obligations of support may be challenged and ultimately change, as

conditions worsen. The indigenous MI population will almost certainly attempt to assume some of the responsibility for housing, supporting, and feeding these new arrivals, but the strategies and likelihood of success are not clear. While benefitting from the flexibility in adaptive capacity due to its being a high-elevation island, the MI do still face a degradation in food production capacity and long-term declines of reef health. The four planned locations for OI settlement will concentrate demands of food, shelter, and water. Provision of the latter two is not expected to be difficult, but access and use of land parcels for food production have never been mapped. Protocols and cultural norms that have long served to create social resiliency for both groups will be tested.

Finally, working within the analytical framework described above, four clear lines of future research within Yap State present themselves. The need for each is consistent with others' findings (e.g., Nunn, 2009), and directly responds to Nurse et al.'s (2014) call for greater depth of investigation within island states. First, more ethnographic work is needed to quantitatively assess how many residents are now displaced because of climate change impacts on their home islands. Second, qualitative fieldwork is also required to assess the cultural consequences of this migration and how, for instance, Yapese and Carolinians are relying on traditional values and protocols to adapt to their changing realities. While the *sawei* practice may be dormant, its heritage still informs views and values toward ensuring the needs of all are met. The degree to which these customs and protocols are influencing adaptive capacity for both groups is entirely unknown. Third, more research is needed to provide a clear understanding of how elements of Yapese and Carolinian cultural heritage can continue to provide a social 'safety net' at a time when the region is becoming ever-more connected to global flows of people, goods, technologies, and ideas. If it is shown that these elements directly or indirectly increase adaptive capacity, then efforts to safeguard their loss would seem to be a valuable option worth considering. Finally, there are considerable questions regarding the net effect of economic aid from the US. Does this assistance help Yap State (and all of FSM) through the purchase of technology, food, jobs, and construction of infrastructure? Or, does financial assistance effectively undermine traditional culture and the longstanding adaptive capacity developed over millennia? With the projected rates of sea-level rise and other climate-related changes in Micronesia, time is limited to begin pursuing the answers.

References

Alkire, W. (1977). *An introduction to the peoples and cultures of Micronesia*. Menlo Park: Cummings.

Allen, M.G. (2015). Framing food security in the Pacific Islands: empirical evidence from an island in the Western Pacific. *Regional Environmental Change*, 15(7), 1341-1353. https://doi.org/10.1007/s10113-014-0734-5

Australian Bureau of Meteorology and CSIRO (2014). *Climate variability, extremes and change in the western tropical Pacific: New science and updated country reports*. Pacific-Australia climate change science and adaptation planning program technical report, Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation, Melbourne.

Barnett, J., & Campbell, J. (2010). *Climate change and small island states: power, knowledge, and the South Pacific*. Earthscan.

Belt, Collins, & Associates (1982). Yap island water well development: January to March 1982. Honolulu: T. Nance.

Cazenave, A., & Remy, F. (2011). Sea level and climate: measurements and causes of changes. *WIREs Climate Change*, 2(5), 647-662. https://doi.org/10.1002/wcc.139

Central Intelligence Agency (2017). Federated States of Micronesia. *CIA world factbook*. https://www.cia.gov/library/publications/the-world-factbook/geos/fm.html

Chui, T.F.M., & Terry, J.P. (2015). Groundwater salinisation on atoll islands after storm-surge flooding: modelling the influence of central topographic depressions. *Water and Environment Journal*, *29*(3), 430-438. https://doi.org/10.1111/wej.12116

Dodson, J.R., & Intoh, M. (1999). Prehistory and palaeoecology of Yap, Federated States of Micronesia. *Quaternary International*, 59(1), 17-26. https://doi.org/10.1016/S1040-6182(98)00068-8

Egan, J.A. (2004). Keeping-for-giving and giving-for-keeping: value, hierarchy, and the inalienable in Yap. In C. Werner & D. Nell (Eds.) *Values and valuables: from the sacred to the symbolic* (pp. 21-48). Walnut Creek: Altamira.

Ellis, S.J. (2012). *Saipan Carolinian, one Chuukic language blended from many*. PhD dissertation, University of Hawaii.

Falanruw, M.C. (2016). Personal communication, 15 June.

Falanruw, M.C. (1990). *Traditional adaptation to natural processes of erosion and sedimentation on Yap island*. Proceedings of the Fiji Symposium, June 1990.

Falanruw, M.C. (1993). *Taro growing on Yap*. Yap Institute of Natural Science. Colonia: Yap, Federated States of Micronesia.

Falanruw, M.C., & Ruegorong, F. (2015). Dynamics of an island agroecosystem. In M.F. Cairns (Ed.) *Shifting cultivation and environmental change: indigenous people, agriculture and forest conservation* (pp. 367-386). London & New York: Routledge.

Falanruw, M.C., Whitesell, C.D., Cole, T.G., MacLean, C.D., & Ambacher, A.H. (1987). Vegetation survey of islands of Yap, Federated States of Micronesia.

Farbotko, C., & Lazrus, H. (2012). The first climate refugees? Contesting global narratives of climate change in Tuvalu. *Global Environmental Change*, 22(2), 382-390. https://doi.org/10.1016/j.gloenvcha.2011.11.014

Federated States of Micronesia (FSM), Division of Statistics (2012). *Summary analysis of key indicators: from the FSM 2010 census of population and housing*. Palikir, Pohnpei.

Gootnick, D. (2016). *Issues associated with implementation in Palau, Micronesia, and the Marshall Islands*. Washington, DC: Government Accountability Office.

Hezel, F. (2009). High water in low atolls. *Micronesian Counselor*, 15 March. http://www.micsem.org

Hunter-Anderson, R.L. (1983). *Yapese settlement patterns: An ethnoarchaeological approach*. Agana, Guam: Pacific Studies Institute.

Hunter-Anderson, R. & Zan, Y. (1996). Demystifying the *sawei*, A traditional interisland exchange system. *ISLA: A Journal of Micronesian Studies,* 4(1), 1-45.

Keener, V.W., Marra, J.J., Finucane, M.L., Spooner, D., & Smith, M.H. (2012). *Climate change and Pacific islands: Indicators and impacts: executive summary of the 2012 Pacific Islands Regional Climate Assessment (PIRCA).*

Krause, S.M. (2015). The art of communication in Yap, FSM: traditional forms of respectful interactions. In S. Lee (Ed.) *Traditional knowledge and wisdom: themes from the Pacific islands* (pp. 46-59). ICHCAP: UNESCO.

Krause, S.M. (2016). *The production of cultural heritage discourses: Political economy and the intersections of public and private heritage in Yap State, Federated States of Micronesia*. PhD Dissertation, University of South Florida.

Kronen, M., & Tafileichig, A. (2008). Traditional rights and management of Yap's coastal fisheries and the role of fisherwomen. *SPC Women in Fisheries Information Bulletin*, 18, 21-25.

Labby, D. (1976). *The demystification of Yap, dialectics of culture on a Micronesian island*. Chicago: University of Chicago Press.

Lazrus, H. (2015). Risk perception and climate adaptation in Tuvalu: a combined cultural theory and traditional knowledge approach. *Human Organization,* 74(1), 52-61. https://doi.org/10.17730/humo.74.1.q0667716284749m8

Lingenfelter, S.G. (1975). *Yap, political leadership and culture change in an island society*. Honolulu: University Press of Hawaii.

Manner, H.I. (1993a). A review of traditional agroforestry in Micronesia. *Proceedings of the workshop on research methodologies and applications for Pacific island agroforestry*, 140, 32-36.

Manner, H.I. (1993b). Taro (*Colocasia esculenta* (L.) Schott) in the atolls and low islands of Micronesia. In L. Ferentinos (Ed.) *Proceedings of the sustainable taro culture for the Pacific conference, September 24-25, 1992* (pp. 88-100). Honolulu: University of Hawaii.

Manner, H.I., & Clarke, W.C. (1993). Traditional agroforestry in the high islands of Micronesia. In W.C. Clarke (Ed.) *Agroforestry in the Pacific islands: systems for sustainability* (pp. 124-130). Tokyo: United Nations University Press.

Marksbury, R. (1979). *Land tenure and modernization in the Yap islands*. PhD thesis, Tulane University, New Orleans.

Marshall, M**.** (1999). 'Partial connections': kinship and social organization in Micronesia. In R.C. Kiste & M. Marshall (Eds.) *American anthropology in Micronesia: an assessment* (pp. 107-143). Honolulu: University of Hawaii Press.

Nedachi, M., Maeda, T., Shigeyoshi, R., Inoue, A., Shimada, K., Higashi, M., Habano, A., Azuma, T., & Hatta, A. (2001). Geological environments of Yap islands, Micronesia. *The progress report of the 1999 survey of the research project Social Homeostasis of Small Islands in an Island-Zone: Yap Proper, Micronesia and Islands in Southern Japan*. Kagoshima University Research Center for the Pacific Islands.

Nunn, P.D. (2013). The end of the Pacific? Effects of sea level rise on Pacific Island livelihoods. *Singapore Journal of Tropical Geography,* 34(2), 143-171.

Nunn, P.D. (2009). Responding to the challenges of climate change in the Pacific islands: management and technological imperatives. *Climate Research,* 40(2-3), 211-231. https://doi.org/10.3354/cr00806

Nunn, P.D. (2007). *Climate, environment and society in the Pacific during the last millennium*. Amsterdam: Elsevier. https://doi.org/10.1016/S1571-9197(07)06001-6

Nunn, P.D., Runman, J., Falanruw, M., & Kumar, R. (2017). Culturally grounded responses to coastal change on islands in the Federated States of Micronesia, northwest Pacific Ocean. *Regional Environmental Change*, 17(4), 959-971.

Nurse, L.A., McLean, R.F., Agard, J., Briguglio, L.P., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E., & Webb, E. (2014). Small islands. In V.R. Barros, C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (Eds.) *Climate change 2014: Impacts, adaptation, and vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1613-1654). Cambridge, UK, & New York, NY: Cambridge University Press.

Pacific Islands Climate Education Partnership (PICEP) (2014). *Climate change in the Federated States of Micronesia*. Honolulu, Hi: Pacific Resources for Education and Learning.

Park, S.E., Marshall, N.A., Jakku, E., Dowd, A., Howden, S.M., Mendham, E., & Fleming, A. (2012). Informing adaptation responses to climate change through theories of transformation. *Global Environmental Change*, 22(1), 115-126. https://doi.org/10.1016/j.gloenvcha.2011.10.003

Petersen, G**.** (2000). Indigenous island empires: Yap and Tonga considered. *The Journal of Pacific History,* 35(1), 5-27.

Petersen, G. (2009). *Traditional Micronesian societies: Adaptation, integration and political organization*. Honolulu: University of Hawaii Press. https://doi.org/10.21313/hawaii/9780824832483.001.0001

Raigetal, L. (2016). Personal communication, 21 December.
Rauchholz, M. (2012). Discourses on Chuukese customary adoption, migration, and the laws of state(s). *Pacific Studies,* 35(1/2), 119-143.
Rubinstein, D.H. (1979). *An ethnography of Micronesian childhood: contexts of socialization on Fais Island*. PhD Dissertation, Stanford University.
Ruegorong, F., Falanruw, M., & Perkins, R. (2016). Saltwater intrusion into near-shore taro patches on Yap, Federated States of Micronesia. Unpublished data.
Shade, P.J., Anthony, S.S., & Takasaki, K.J. (1992). *Ground water resources reconnaissance of the Yap main islands, Federated States of Micronesia*. Water Resources Investigation Report, 90-4074. Honolulu.
Smit, B., Pilifosova, O., Burton, I., Challenger, B., Huq, S., Klein, R.J.T., Yohe, G., Adger, N., Downing, T., Harvey, E., Kane, S., Parry, M., Skinner, M., Smith, J., & Wandel, J. (1999). *Adaptation to climate change in the context of sustainable development and equity, contribution of working group II to the third assessment report of the intergovernmental panel on climate change: Adaptation to climate change in the context of sustainable development and equity*. Cambridge: Cambridge University Press.
Smith, C. (1983). *Soil survey of islands of Yap, Federated States of Micronesia*. Washington, DC: United States Department of Agriculture.
Steward, J. (1955). *Theory of culture change: the methodology of multilinear evolution*. Urbana: University of Illinois Press.
Stone, E.L., Migvar, L., & Robison, W.L. (2000). *Growing plants on atoll soils* (UCRL-LR-137517). Livermore: Lawrence Livermore National Lab. https://doi.org/10.2172/756838
Storlazzi, C.D., Edwin, P.L.E., & Berkowitz, P. (2015). Many atolls may be uninhabitable within decades due to climate change. *Scientific Reports*, 5, 14546. https://doi.org/10.1038/srep14546
Stratford, E., Farbotko, C., & Lazrus, H. (2013). Tuvalu, sovereignty and climate change: Considering Fenua, the archipelago and emigration. *Island Studies Journal*, 8(1), 67-83.
Terry, J.P., & Falkland, A.C. (2009). Responses of atoll freshwater lenses to storm-surge overwash in the Northern Cook Islands. *Hydrogeology Journal,* 18(3), 749-759. https://doi.org/10.1007/s10040-009-0544-x
Throop, C.J. (2010). *Suffering and sentiment: exploring the vicissitudes of experience and pain in Yap*. Berkeley: University of California Press.
Timmermann, A., McGregor, S., & Jin, F.F. (2010). Wind effects on past and future regional sea level trends in the southern Indo-Pacific. *Journal of Climate*, 23(16), 4429-4437. https://doi.org/10.1175/2010JCLI3519.1
Underwood, J.H. (1969). Preliminary investigations of demographic fea-tures and ecological variables of a Micronesian island population. *Micronesica*, 5(1), 1-24.
United Nations (1994). Report of the global conference on the sustainable development of small island developing states. Document A/CONF.167/9, Global Conference on the Sustainable Development of Small Island Developing States. Bridgetown: United Nations.
United Nations Framework Convention on Climate Change (UNFCCC) (2005). *Climate change: Small island developing states*. Bonn: Climate Change Secretariat.
U.S. Relations with the Federated States of Micronesia (n.d.). In *U.S. bilateral relations fact sheets*. https://www.state.gov/r/pa/ei/bgn/1839.htm
Werner, A.D., Sharp, H.K., Galvis, S.C., Post, V.E.A., Jacovovic, D., Bosserelle, A., & Sinclair, P. (2017). Hydrogeology and management of freshwater lenses on atoll islands: review of current knowledge and research challenges. *Journal of Hydrology*, 551, 819-844. http://dx.doi.org/10.1016/j.jhydrol.2017.02.047
Yap Branch Statistics Office (2002). *Yap State census report: 2000 FSM census of population and housing*. Colonia, Yap: Division of Statistics, Department of Economic Affairs.
US Department of Interior (2017). *Fiscal year 2016 annual report*. Washington, DC: US Government.

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Adapting to climate change at the national level in Caribbean small island developing states

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ABSTRACT: Small island developing states (SIDS) are distinct from other developing countries: they are particularly and comparatively more vulnerable to the impacts of climate change. Efforts to understand national-level vulnerability in these countries are limited. This paper helps to fill this gap and has two main aims. First, it identifies trends in national-level climate change adaptation among SIDS in the Caribbean region. Second, it identifies the limits to adaptation at the national level in these countries. In applying a resilience lens, and using summative content analysis techniques and semi-structured interviews with 26 senior policy-makers, this paper finds that Caribbean SIDS are primarily adapting to changes in hurricane, rainfall, and drought patterns. It also finds that most adaptations are being undertaken in the coastal zone and the water and agriculture sectors, and that there are many factors limiting national-level adaptation. The most commonly reported limit is financing, though not all policy-makers agree that financing is a limit. These findings are important for national SIDS governments and international donors and agencies that will be better able to identify and fill gaps in their adaptation actions and financing. This paper's findings also highlight the importance of depoliticising climate change and prioritising good governance, improving SIDS' access to international adaptation financing, and making the road to a climate-resilient future by walking.

Keywords: adaptation, Caribbean, climate change, finance, limits, resilience, small island developing states (SIDS), trends

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Introduction

Small island developing states (SIDS) are distinct from other developing countries: they are particularly and comparatively more vulnerable to the impacts of climate change. However, they are vulnerable in different ways and have vastly different capacities for effective climate change adaptation and resilience building. Their uniqueness and diversity are, however, acknowledged in a range of international policy documents relating to environment and development. These include the 1992 United Nations Framework Convention on Climate Change (UNFCCC), the 1994 Barbados Programme of Action for the Sustainable Development of SIDS, and the 2015 Paris Climate Agreement.

Chapter 29 of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (AR5) reconfirms that, "Given the inherent physical characteristics of small islands, the high level of vulnerability of small islands to multiple stressors, both climate and non-climate" exists (Nurse et al., 2014, p. 1616). These vulnerabilities, understood as "the propensity or predisposition to be adversely affected" (IPCC, 2014, p. 1775), span economic, social, political, and environmental domains. They are inextricably linked to adaptive

capacity, or the "ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences" (IPCC, 2014, p. 1758). As a result, climate change adaptation is an important component of sustainable development in SIDS (Robinson, 2017).

Adaptation is probably best understood as "the process of adjustment to *actual or expected* climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects" (IPCC, 2014, p. 1758). At the national level, therefore, governments and other actors with country-wide reach and influence contribute to, participate in, and/or facilitate the required adjustments across multiple sectors (see, e.g., Berrang-Ford et al., 2011; Pauw, 2014). The extent to which national SIDS governments can successfully implement adaptations will influence the sustainability of development pathways in these countries.

Though there is no official list of SIDS, the United Nations Office of the High Representative for the Least Developed, Landlocked Developing Countries and the Small Island Developing States (UN-OHRLLS) identifies 58 SIDS across three main geographic regions—29 of these are located in the Caribbean. Only 16 of the 29 Caribbean SIDS have United Nations membership.

Box 1: List of Caribbean SIDS. (Based on UN-OHRLLS, 2011; symbols are explained in the Methods section of this paper.)

1. Anguilla[+]
2. Antigua and Barbuda[⋆#+]
3. Aruba[+]
4. Bahamas[#+]
5. Barbados[+]
6. Belize[⋆#+]
7. Bermuda[+]
8. British Virgin Islands
9. Cayman Islands[+]
10. Cuba[+]
11. Curacao
12. Dominica[⋆#+]
13. Dominican Republic[+]
14. Grenada[+]
15. Guadeloupe
16. Guyana[⋆#+]
17. Haiti[+]
18. Jamaica[⋆#+]
19. Martinique[+]
20. Montserrat
21. Puerto Rico[+]
22. Sint Maarten
23. St. Kitts and Nevis[+]
24. St. Lucia[⋆#+]
25. St. Vincent and the Grenadines[+]
26. Suriname[+]
27. Trinidad and Tobago[⋆#+]
28. Turks and Caicos Islands
29. United States Virgin Islands[+]

Chapter 29 of AR5 synthesises the key climate vulnerabilities of and impacts for small islands, including those in the Caribbean. Four of these impacts are highlighted here. The first impact is sea-level rise. Drawing on work by Palanisamy et al. (2012), for example, the Report confirms that sea-level rise in the Caribbean between 1950 and 2009 was similar to the rising global average: approximately 1.8 mm per year. The second impact is an increase in the intensity of tropical and extratropical cyclones. The Report uses research by Cambers (2009) to attribute higher beach erosion rates in the Caribbean to higher incidence of hurricanes. Between 1985 and 2000, the average yearly rates of beach erosion were 0.5 m. Increased beach erosion rates are also connected to issues of human impact on changing coastlines. For example, work by Schleupner (2008) supported conclusions about physical infrastructure impeding the natural retreat of wetlands and beaches. The third impact is increasing air and sea surface temperatures, which trigger coral bleaching events. The Report draws on research by Oxenford et al. (2007) to show the extensive impacts of such events: up to 70% of corals were bleached following a Caribbean-wide event in 2005. The fourth

impact is changing rainfall patterns. Caribbean rainfall records between 1900 and 2000, studied by Jury and Winter (2010) and cited by the Report, reveal a consistent 0.18 mm annual reduction in rainfall. Changing rainfall patterns have an impact on island freshwater variability and availability in the Caribbean (Cashman et al., 2010). These key climate vulnerabilities and impacts, as well as the region's dependence on income-generating sectors such as tourism and fisheries, heighten the importance of avoiding management failures in a SIDS context (see Clayton, 2009; Mycoo, 2007, 2014; Pantin, 1999).

This paper focuses on national-level adaptation in Caribbean SIDS. This focus is important, as it provides an opportunity for actors at other scales (i.e., subnational and supranational) to identify gaps in government action and to form the basis for cooperative action. This study differs from previous studies such as Day et al. (2016), Roson (2014), and CARIBSAVE Partnership (2012), which focus on assessing climate variability, modelling climate impacts, and developing risk profiles, respectively. This paper has two main aims. First, it identifies trends in how SIDS in the Caribbean region are adapting to climate change at the national level. Second, it identifies the limits to adaptation at the national level in these countries. In order to achieve these aims, the remainder of the paper is organised into six sections. The first section reviews the academic literature. The second explains the theoretical framework, and the third describes the methods. The fourth and fifth sections present the results and then discuss them. The sixth and final section summarises this paper's main contributions to the literature.

Literature review

There is limited academic research that substantially examines climate change and adaptation in Caribbean SIDS. This section reviews 17 peer-reviewed articles, reviews, and book chapters retrieved from a systematic search of Scopus®, an academic database, on March 15, 2017 (the time of writing). The inclusion of four key words ("climat* change" AND "adapt" AND "small island" AND "Caribbean") appearing in article titles, abstracts, and key words retrieved six results (the use of the asterisk accommodated words with different stems). An expanded search using three key words ("climat* change" AND "adapt" AND "Caribbean") retrieved 36 results. From this, 19 results were excluded because they were either not peer-reviewed (N=2), not written in English (N=2), or because their titles or abstracts were not relevant (N=4 and N=11, respectively). Figure 1, below, presents an illustrated summary of the 17 publications included in this review. They are organised by publication year (see Part A), system of focus (see Part B), topic (see Part C), and case study country (see Part D).

Based on the Scopus® search results, academic research into climate change and adaptation in Caribbean SIDS is generally increasing, and tends to focus on climate impacts and adaptations in human systems. In general, research uses multi-country (>2) case studies. This section provides a brief summary of the relevant articles from the Scopus® search. It does not intend to give a comprehensive overview of all the literature relating to climate change adaptation in SIDS. Instead, it takes a systematic approach to highlighting the gaps in the literature that relate specifically to Caribbean SIDS.

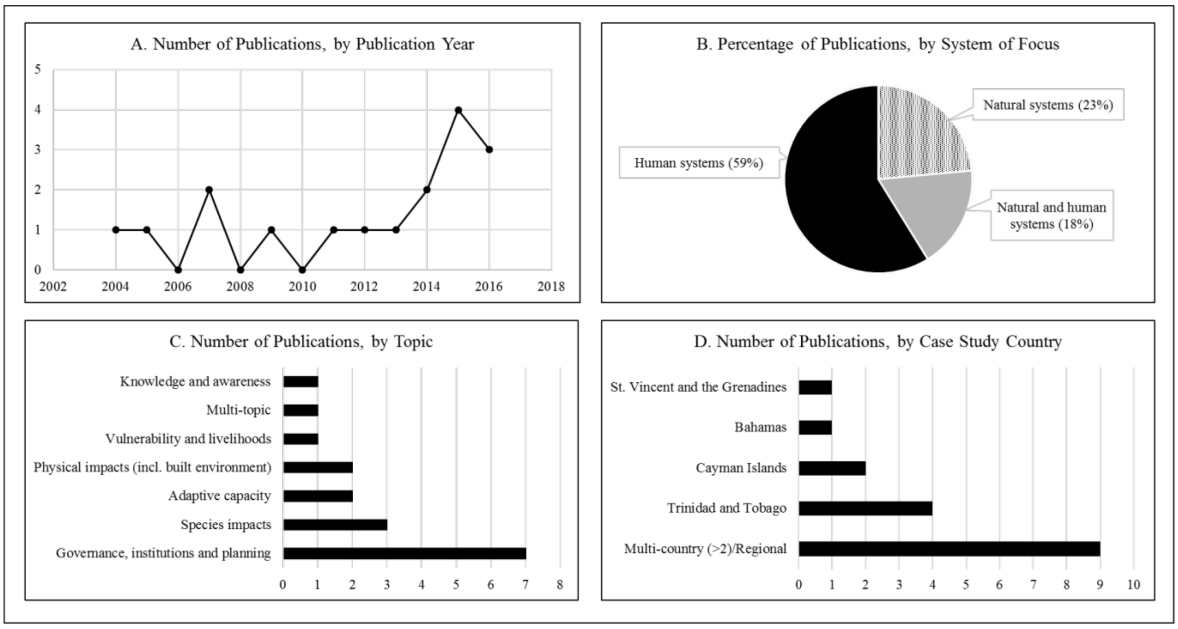

Figure 1: Illustrated summary of the literature on climate change and adaptation in Caribbean SIDS. (© Stacy-ann Robinson)

The main topic across the 17 peer-reviewed articles, reviews, and book chapters is the governance of, as well as institutions and planning for, climate change and adaptation in Caribbean SIDS. This is the focus of seven publications (41%) (see Part C in Figure 1). Adger et al. (2011, p. 760) examine hurricanes as system stressors in the Cayman Islands, particularly citing "recurrent exposure to hazards within living memories" and the "experiences of neighboring countries" as revealing the "importance of preparedness." They further examine the sources of resilience, active responses to hazards, and the effects of these responses on resilience, discussing the role and importance of prioritising infrastructure, logistics, governance, and active learning in recovery processes. The authors observe "sensitivity to the impacts of policy responses" alongside a "high level of flexibility in future responses, which are continually evolving" (Adger et al., 2011, p. 762). Hughes (2013, p. 570) emphasises the role people play in accelerating climate change and their "responsibility, complicity, and culpability" in this regard. Mahon and Fanning (2016, p. 107) acknowledge the role of extra-regional environmental change on ocean governance in the region, and argue that effective ocean governance must be appropriately positioned in the international arena as well as "contribute to the emerging governance structure, and learn from what is working, and not working, in other regions." Based on their studies of informal urban settlements in Trinidad and Tobago, Middelbeek et al. (2014, p. 143) suggest that "A proper analysis of CC [climate change] governance, therefore, requires an institutional examination that focuses on internal processes, external relationships, and linkages with different social groups and households." Robinson (2017) provides a global outlook of adaptation actions in SIDS, but with little focus on Caribbean SIDS. Robinson and Gilfillan (2017) zero in on the adaptation-related inputs, outputs, and projects/programs of the Caribbean Community Climate Change Centre (CCCCC or 5Cs), which is the "key node for information on climate change issues and on the region's response to managing and adapting to climate change in the Caribbean" (CCCCC, 2015, online). Based on their study of adaptive capacities at the household level in Trinidad and Tobago, Shah and Dulal (2015, p. 1379) recommend that SIDS policy-makers "consider food security in light of climate variability and related weather-induced impacts." Tompkins (2005, p. 139) studies storm risk in the Cayman Islands, concluding that "self-efficacy, strong local and international support networks, combined with a willingness to act collectively and to learn from mistakes appear to have increased the resilience."

The issue of governing climate change in Caribbean SIDS is connected to knowledge, vulnerability, livelihoods, and adaptive capacity. Rawlins et al. (2007) capture the variations in knowledge, attitudes, and practices (KAPs) towards climate change, as well as impacts detection and attribution in Trinidad and Tobago and St. Kitts and Nevis. Work by Smith and Rhiney (2016) underscores the sensitivity and exposure of Indigenous communities to climate-related hazards, and draws attention to the role of economic and political factors in driving vulnerability. Tompkins and Adger (2004) support building resilience as a way to cope with environmental change, and their study demonstrates a positive relationship between community-based management and adaptive capacity.

Other related articles focus on the impacts of climate change on both the physical environment and various species. Beach monitoring conducted as part of a study by Cambers (2009) shows upward trends in beach erosion across eight islands. Donner et al. (2007) examine the effects of warmer seas on a major coral bleaching event in the Caribbean, while Muñoz et al. (2014) and Thorpe et al. (2015) focus on tropical lizards. Muñoz et al. (2014, p. 1) "discuss how exposure to selection on physiology influences divergence among tropical organisms and its implications for adaptive evolutionary response to climate warming," and Thorpe et al. (2015) suggest that anthropogenic climate change may not be as big a threat on the species (as opposed to invasive alien species or habitat loss, for example) due to their rapid evolution. Rockwellet al. (2012) study migratory birds in the Bahamas and find that "first-time breeders were much more sensitive to changes in rainfall than experienced adults" and that the drying trend in the Caribbean would result in fewer offspring. Vergara et al. (2015) quantify loss and damage from the physical impacts of climate change in a number of sectors in Latin America and the Caribbean, including agriculture, health, and marine and terrestrial ecosystems. Though their estimates also include Latin America, their work puts a price tag of US$85-$110 million per year on climate-related loss and damage up to 2050.

Theoretical framework

This paper, following the work of Adger et al. (2011), applies a resilience lens to understanding how Caribbean SIDS are adapting to climate change at the national level and the factors that are potentially limiting this adaptation. Because of the uncertainties associated with climate change as well as the uncertainties in adaptive capacities (see, e.g., Adger & Vincent, 2005; Foley, 2010), Barnett (2001) zeroes in on a small island context and suggests the need for a "complementary strategy aimed to *enhance the resilience of whole island social-ecological systems*" (emphasis added). Though resilience is a contested term—it has been varyingly defined in the literature (Bahadur et al., 2010; Saxena et al., 2017)—this paper understands it as "The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation" (IPCC, 2014, p. 1772). Resilience is underpinned by sustainable development, and is seen as a process along a continuum. This process is not necessarily linear, though often depicted as such (building on Manyena, 2006) (see Figure 2, below). It is further seen as having an opposite relationship with 'vulnerability' and being similar to 'adaptive capacity' (following Osbahr, 2007). According to Hay (2013, p. 309), "Vulnerability [and adaptive capacity] and resilience are considered to be important integrating concepts when managing the local consequences of global changes." As a result, many adaptation actions are geared towards reducing vulnerability and increasing adaptive capacities and resilience through improving climate-related knowledge and "strengthening socio-economic systems and livelihoods" (Hay, 2013, p. 309). "Managing global change can be closely aligned with local development […] processes" (Hay, 2013, p. 309) (also Gallopín, 2006; McEvoy et al., 2013). This will enhance "the overall sustainability of development

processes and outcomes" (Hay, 2013, p. 309). In applying a resilience lens, however, this paper makes a number of assumptions. These include that countries are required to respond to climate impacts, and that they aim to reduce their vulnerabilities and increase their resilience to these impacts. Furthermore, viewing resilience and vulnerability as polar opposites may not acknowledge the possibility of a country being resilient to one impact, yet vulnerable to another (Bahadur et al., 2010).

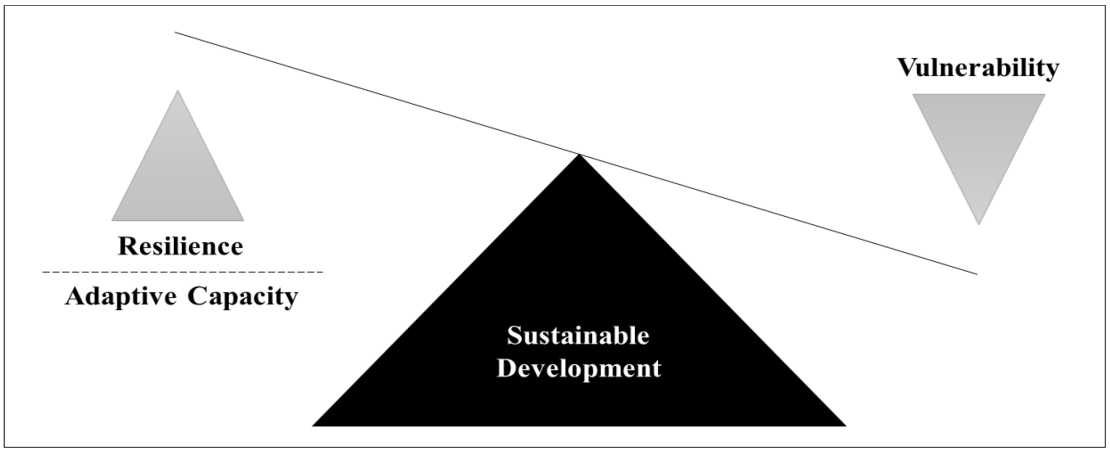

Figure 2: A conceptualisation of resilience, vulnerability and adaptive capacity. (© Stacy-ann Robinson)

Methods

This paper replicates the methods outlined in Robinson (2017) and generates results for adaptation trends in Caribbean SIDS. It considers seven countries (24% of the 29 Caribbean SIDS and 44% of the 16 Caribbean SIDS with United Nations membership): Antigua and Barbuda, Belize, Dominica, Guyana, Jamaica, St. Lucia, and Trinidad and Tobago. These countries are denoted by an asterisk, '*', in Box 1 above. Summative content analysis techniques were applied to the adaptation-related chapters in countries' Initial or Second National Communication to the UNFCCC Secretariat that were submitted in English before December 31, 2014. National Communications (1) are considered official government documents and contain their climate change policies, (2) detail the adaptation actions undertaken by them, and (3) are important for understanding more about the climatic and climate-related vulnerabilities and adaptive capacities of reporting countries (following Lesnikowski et al., 2015). Each relevant chapter was read twice. National-level adaptation actions were manually coded, counted, and compared according to the vulnerabilities, sectors, and actors described. Incomplete actions were not coded.

A sample of eight countries was used to investigate climate change adaptation limits in Caribbean SIDS: the seven named in the preceding paragraph plus the Bahamas, which submitted its Second National Communication in 2015. These countries are denoted by a hash sign, '#', in Box 1 above. Summative content analysis techniques were again applied to these countries' Initial or Second National Communication to the UNFCCC Secretariat, where these were submitted in English before December 31, 2015 (i.e., up to one year after the first analysis of adaptation trends was done). Each relevant chapter was read twice. The occurrence of the word 'limit' alongside or in relation to one or more of six other key words and their variants—'adapt', 'barrier', 'constrain', 'obstacle', 'risk' and 'threat' (per Klein et al., 2014)—was counted and compared.

Like Betzold and Weiler (2017) and Robinson and Dornan (2017), this paper further uses the Rio Climate Markers database to identify trends in bilateral adaptation financing from Members of the Organisation of Economic Co-operation and Development (OECD), a

major donor, but exclusively to Caribbean SIDS. Data for 23 Caribbean SIDS (79% of all 29 Caribbean SIDS) are considered (indicated by a plus sign, '+', in Box 1 above): Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Martinique, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the United States Virgin Islands. The Rio Climate Markers track financing for climate adaptation, climate mitigation, biodiversity, and desertification actions (OECD, 2011). Results are presented by year, score (i.e., whether adaptation funds principally or significantly supported adaptation), and individual OECD donors.

Alongside these results are the findings from semi-structured interviews with 26 Caribbean policy-makers working with national governments in Jamaica and St. Lucia, and with regional organisations such as the CCCCC. Email invites were sent to 66 national and regional policy-makers. The names of potential interviewees were derived from the UNFCCC website and from official government documents. The response rate was 39%. Interviewees were representative of the total population: they were senior in their respective organisations, directly responsible for environment and development portfolios, available during the interview period, and willing to participate in the interviews. Interviews were undertaken in person or via Skype teleconferencing between August 2014 and July 2016, and focused on policy-makers' views on adaptation trends and limits. Interview audio was listened to twice and manually coded, paying particular attention to emerging themes. Direct quotes are used to illustrate key points and are attributable to a specific interviewee by way of a unique identifier (e.g., ID01, which represents the first interviewee) so as to conceal their identities.

The selected methods have limitations. First, using National Communications as a data source to understand trends in and limits to climate change adaptation is not ideal as these Reports may be prone to under- and/or over-reporting. Further, only United Nations Member States are required to produce them. Of the 29 SIDS in the Caribbean, only 16 (or 55%) are United Nations Member States, which impacts the various country sample sizes used in this study. Despite this, National Communications are currently the most consistent source of nationally reported, national-level adaptation actions across developing countries (Lesnikowski et al., 2015). Second, many of the interviewees were Jamaican policy-makers, which is largely due to the comparatively large size of the Jamaican civil service, the availability of potential interviewees, and their interest in participating in the study. This could be a potential source of bias in the data. However, this was partially offset by the fact that many interviewees were also regional policy-makers, representing a diverse range of countries from across the region. Third, the Rio Markers system has been criticised for facilitating donors tagging 'regular' development financing as climate financing without meeting their obligation to provide additional financing for climate action (see, e.g., Stadelmann et al., 2011). Additionally, the collection of climate financing data as part of the Rio Markers system has a relatively short history (from 2010 onwards)—compared to financing for biodiversity, for example, which limits the extent of longitudinal analyses that can be carried out. Despite this, the System is acknowledged as one of the most comprehensive datasets currently available (Betzold & Weiler, 2017).

Results

Trends in climate change adaptation in Caribbean SIDS

Four hundred and sixty-two national-level adaptation actions were counted across the National Communications of the seven Caribbean SIDS sampled. Incomplete actions were not counted. The single most commonly reported action was vulnerability and impact assessments, which accounted for 10% of adaptation actions. This was followed by adaptation research, as well as workshops and training, which accounted for 9% each. In terms of the

climate-induced vulnerabilities that the named actions were addressing, countries reported responding most to non-exclusive changes in hurricanes and storm surge/coastal inundation (12% each; of instances where climate-induced vulnerabilities were indicated), rainfall (11%), air and sea surface temperatures (10%), and drought conditions (10%). In terms of addressing non-climate-induced vulnerabilities, countries reported responding most to non-exclusive economic constraints (22% of instances where non-climate-induced vulnerabilities were indicated), social factors (9%), the impacts of recreational and development activities (7%), and pollution and waste (6%). National governments reported being most non-exclusively engaged with other country governments (i.e., through bilateral relations) (26% of actions), with regional and sub-regional organisations (22%), and with inter-governmental/ international organisations (18%). By sector, the highest number of adaptations were reported in the coastal zone and the environment (not otherwise classified) (12% each; of instances where sectors were indicated). This was followed by actions in the forestry and agriculture (11%), tourism (10%), and water (9%) sectors. Adaptations in the finance sector accounted for 7%. No adaptations in the social sector were reported.

When asked about adaptations that were being undertaken in the region, most interviewees were able to quickly list public education and awareness activities along with stakeholder consultations. Examples included radio, TV and print campaigns, the training of journalists, and interfaces with primary and secondary schools (e.g., logo competitions) (e.g., ID04-05, ID13-14). Adaptation research was also an important activity. In Jamaica, for example, a survey of the public's KAPs towards climate change was conducted in 2012, with the hope of the activity being repeated every three years (ID13). Another example was a cost-benefit analysis conducted for a mobile desalination project in St. Lucia (ID26). Interviewees also cited the development, review, and analysis of climate change policies (ID08, ID13, ID14-16, ID26). This included the mainstreaming of climate change considerations into sectoral policies for water, forestry, tourism, industry and commerce, and disaster risk reduction (ID01, ID04, ID05, ID13, ID26). Some interviewees spoke to organisational changes such as the creation of a Climate Change Division in Jamaica (ID08-12, ID14), which is believed to be the only country in the region to establish a clear climate change focus in its government (ID14). Only three interviewees mentioned vulnerability and adaptation assessments (ID08, ID14, ID26).

There was consensus among interviewees that many adaptations in the Caribbean were being undertaken in the water and agriculture sectors. One interviewee pointed out that vulnerable sectors were identified in countries' Initial National Communication to the UNFCCC and that governments have been working to reduce climate vulnerabilities in these sectors (ID08). In the case of Jamaica, these sectors were water, agriculture, human health, and coastal resources (including human settlements) (ID08). With respect to coastal resources, one official underscored that:

> Over 60% of Jamaica's population is located in the coastal area—almost the entire landscape is vulnerable. The economy is so dependent on coastal resources. If a major hurricane comes, the whole economy would crash. (ID01)

Other sectors of focus include forestry, fisheries, and tourism (e.g., ID01, ID19, ID26). Three interviewees also mentioned adaptations in the energy sector, but noted that these actions were not being undertaken solely because of climate change (ID14, ID19, ID26). According to one of the three interviewees, "Energy for us is not just about climate change. It's about economics" (ID19).

In terms of climate-induced vulnerabilities, most interviewees identified sea-level rise as the most critical climate change impact for Caribbean SIDS (e.g., ID01, ID13, ID26). One interviewee further questioned the implications of sea-level rise for land resources,

communities, social services, livelihoods, and the people (ID13). Interviewees also mentioned the intensity of storms and other natural disasters (e.g., ID04, ID05, ID08, ID19). Only one interviewee identified ocean acidification as a climate impact, but was quick to note that the issue was an emergent one and not much was known about the science behind the phenomenon or the policy responses that would be required (ID14).

All interviewees agreed that countries in the region face a myriad of non-climate-induced vulnerabilities that were thought to be impeding the achievement of sustainable development. One official shared that:

> The National Security Policy identified 90 threats to Jamaica […] The impact of crime in Jamaica is fifteen times higher than that of earthquakes. The cost of crime is 7.5% of the country's GDP […] A hurricane costs [the country] 2% of GDP every couple or few years but the high probability-high impact events are crime and corruption. These do more harm than any other threat. (ID24)

Also on the perceived enormity of the threat of crime and corruption on the region's development, another official noted that:

> Eight out of the ten most violent countries in world are in the LAC [Latin America and Caribbean] region. The extent of the problem is actually quite horrendous. (ID25)

These views suggest that the most pressing non-climate-induced vulnerability in Caribbean SIDS could, in fact, be social in nature.

Limits to climate change adaptation in Caribbean SIDS

Across the National Communications of the eight Caribbean SIDS sampled (Antigua and Barbuda, Bahamas, Belize, Dominica, Guyana, Jamaica, St. Lucia, and Trinidad and Tobago), 202 limits to national-level adaptation were counted. Incomplete actions were not counted. In rank order, countries mostly reported being limited non-exclusively by (1) finances, budgetary restrictions, and income (15%); (2) technical capacity and resources (10%); (3) data and records (8%); (4) natural resources and features (6%); (5) human resources, manpower, and turnover (6%); (6) knowledge and understanding of climate effects, especially (to be) gained through research (5%); (7) the focus or scope of national policies, legislation, and regulations (4%); (8) monitoring and evaluation, and enforcement capacity (3%); (9) size (3%); and (10) public education and awareness (3%). The least commonly reported non-exclusive limits were land arability and soil chemistry, the social acceptability of the adaptations proposed and undertaken, and the frequency and intensity of climate impacts. Figure 3, below, contains the full results for the eight countries.

No.	Adaptation Limit	Total Counts
1	Finance e.g. government expenditure	31
2	Technical capacity/resources	21
3	Data/records	16
4	Natural resources/features (availability of/dependence on)	13
5	Human resources/manpower/turnover	12
6	Knowledge/understanding (of climate effects; gained through research) and expertise	10
7	National focus/policy/legislation and regulations	8
8	Monitoring and evaluation/enforcement capacity	7
9	Size (including population)	6
10	Public education (including formal), awareness, knowledge, 'ownership'	6
11	Poor inter-agency communication/coordination	5
12	Individual limits/preferences	5
13	Nature and diversity of impacts	5
14	Limited capacity to adapt	4
15	Modelling software/models	4
16	Natural hazards	4
17	Land area/availability/use	4
18	Opportunities/options/choice	3
19	Mainstreaming (disaster risk reduction and/or adaptation into development)	3
20	Facilities/equipment e.g. medicine storage/hurricane shelters	3
21	Existing infrastructure	3
22	Response capability	3
23	Markets/economic structures	3
24	Sector productivity	3
25	Environmental conditions/management/natural thresholds	3
26	Technological	2
27	Capacity to manage	2
28	Cost and other effect	2
29	(Re)insurance	2
30	Stakeholder participation	2
31	Culture	1
32	Perceptions	1
33	Social acceptability	1
34	International law e.g. limits of the Exclusive Economic Zone	1
35	Socio-economic conditions	1
36	Frequency/intensity of impacts	1
37	Land arability/soil chemistry	1

Figure 3: Limits to climate change adaptation in Caribbean SIDS. (© Stacy-ann Robinson, as reported in National Communications)

Most interviewees agreed that financing and organisational capacity are two of the major limits to adaptation in Caribbean SIDS (e.g., ID13, ID14, ID19, ID26). According to one official, "Limits in the Caribbean context deal with economics and growth" (ID26). Some SIDS, such as Jamaica, have an "air-tight fiscal space because of the IMF Agreement" (ID13). Another interviewee stated:

> Every year the budget is cut and you're told to survive on what you've been given—most of the funding is project funding. We rely heavily on project funding, which comes with conditions. You might know the ideal way [of implementing a project successfully] but the money comes with conditions. (ID01)

Some officials agreed that financing may be a secondary issue. One official said, "A lot of the times, it is some of the other institutional or organisational issues that are causing the problem" (ID08). Two officials, in particular, were outspoken in disagreeing that financing is a major adaptation limit in Caribbean SIDS. One of these officials stated:

> Small island states in the Caribbean first need to look at governance before we start talking about finance […] Finance is not our major impediment. If we are not properly structured internally, our institutions are too politicised or they are not working the way they ought to work then it doesn't matter how much monies we pour or throw at the problem, the problem will not be solved. I am saying clearly that our biggest challenge is not climate change. It's governance […] All you need to do is check the Transparency International Index to see the level of corruption [across the region] and where our countries rate along that Index. It wouldn't make for pretty reading. (ID19)

With respect to organisational capacity, one civil servant stated, "Skilled labour in the Caribbean is always migrating. We can't stop migration but we sure can slow it down" (ID19). Two other civil servants noted, respectively, that:

> Research capacity is so limited across the Caribbean. Investment is less than ½% of GDP. 1½ to 2½% of GDP is what countries with good capacities are spending. The University of Sao Paolo is in the top 200 universities. UWI [University of the West Indies] is not even in the top 1,000. There are universities but they primarily teach. Although there are pockets of research excellence, the capacity is really low. (ID24)

> 'Oh, I think' or 'Oh, I suppose' are phrases we use a lot—knowledge management is a real challenge in SIDS. (ID26)

Officials raised a number of other factors, including the small size of islands. Of particular concern was the role that the region's socio-political culture plays in limiting adaptation action. One official, referencing the nature of the public's relationship with politicians, noted, "In the Caribbean, we have a culture of dependency, not independence" (ID26). Another official, specifically referencing Jamaica, explained that the "'politics of patronage'" was introduced in 1972" (ID24). ID01 gave a telling example of this:

> Persons are living in vulnerable locations. But it's really hard to get them to move. You face resistance from MPs and Councillors indirectly. They don't want you to relocate them because they will lose votes [if electoral populations change]. They want you to mitigate even though relocation is the best option. It's a bigger problem than you think.

Similar to the results in the previous section, these views suggest that non-finance-related factors such as poor governance, corruption, and socio-political culture are potentially playing an equal or greater role in limiting adaptation in Caribbean SIDS.

Climate change adaptation financing to Caribbean SIDS

Fifteen Caribbean SIDS received US$824 million worth of commitments from Members of the OECD between 2010 and 2014. These countries were Antigua and Barbuda, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago. These recipient countries account for 65% of the 23 aid-receiving Caribbean SIDS and for 52% of all 29 Caribbean SIDS.

Over the period, total commitments generally increased. Commitments were lowest in 2010 (US$60 million) with a dip from 2011 to 2012 (US$115 million) and highest in 2014 (US$355 million) (see Figure 4A, below). Significant adaptation financing (US$492 million) outpaced principal adaptation financing (US$331 million), with total significant financing

over the period accounting for 60% of total financing (see Figure 4B, below). In these cases, though adaptation was a significant objective, the project had "other prime objectives" or had been "formulated or adjusted to help meet climate concerns" (OECD, 2011, p. 2). Where adaptation was the principal objective, the project would not "have been funded but for that objective" (OECD, 2011, p. 2).

Of the 15 recipient countries, the top five were (in rank order) Dominican Republic, Haiti, Guyana, Jamaica, and Cuba. Together, commitments to these countries accounted for 88% of total commitments to Caribbean SIDS. The Dominican Republic received the largest commitment of principal financing over the period (US$222 million), which accounted for 67% of total principal financing to the region. This commitment of principal financing to the Dominican Republic was also 500% more than that committed to Haiti, which received the second largest commitment of principal financing (US$37 million) (see Figure 4C, below). Both Haiti and Guyana received the largest commitments of significant financing over the period (US$164 million and US$144 million, respectively). Barbados and Trinidad and Tobago received the smallest commitments, totalling US$0.1 million, which was 339% less than Antigua and Barbuda (US$0.6 million), the country receiving the third smallest commitments over the period. Barbados and Trinidad and Tobago only received principal financing.

The top five individual donors to the region, in rank order, were France, European Union (EU) institutions (e.g., the European Investment Bank and other European multilaterals), Norway, Spain, and United States (see Figure 4D, below). Together, they made up 79% of the total commitments to the region. France made the largest commitment to the Dominican Republic; Norway to Guyana; and EU institutions to Jamaica.

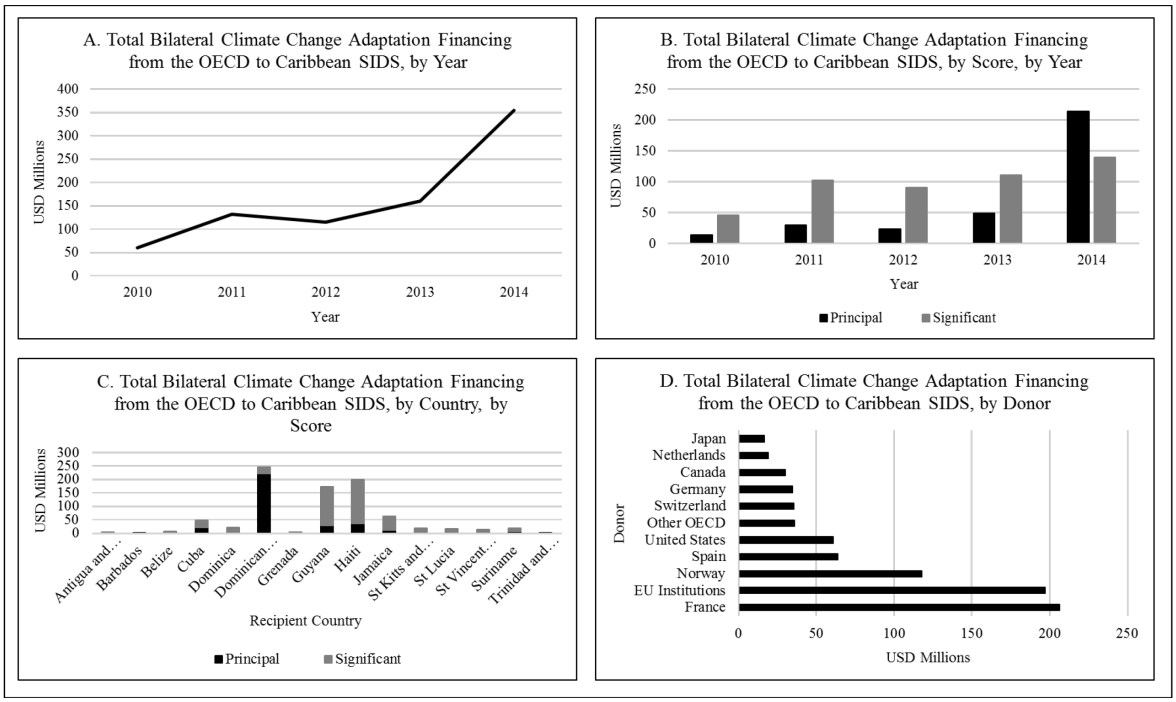

Figure 4: Total climate change adaptation financing from Members of the Organisation of Economic Co-operation and Development to sampled Caribbean SIDS, 2010-2014. (© Stacy-ann Robinson; based on OECD, 2015)

Interviewees acknowledged that access to international adaptation financing is a challenge for Caribbean SIDS and argued that most countries required support:

> Some SIDS are quite poor. [But] not all developing countries will require support e.g., Singapore […] Trinidad and Tobago, which is rich in oil, Bahamas with [its] strong economy. But some countries are overwhelmed e.g., Jamaica, Guyana and Barbados and a lot of the countries in the Pacific and we need to have the support. (ID08)

Considering the demand side of adaptation financing in SIDS, "Programs and policies are driven by financing" (ID14). But there are some countries such as the Bahamas that "cannot access some funding sources because of their economic classification [as a high-income economy]" (ID13). Also, "some of the countries accessing loans [for climate change adaptation] already have a high debt burden" (ID13). These and related issues aside, one civil servant said:

> There are some things that you can do without a lot of money. The countries that don't have a climate policy in place, for example […] it's a poor excuse to say that you don't have the money to do it. Yes, it may require an expert at some point […] and in some cases, if you really want to get finance to do something like that, it is available but countries don't take advantage of it. (ID08)

Considering the supply side, one interviewee acknowledged that "grant funding is not flowing as freely as was promised" (ID14). This could be the case for a number of reasons. Two possibilities are given here. First, according to one interviewee:

> We had some success with the Adaptation Fund in how that was assisting countries with their adaptation needs. The source of the Fund has dried up somewhat as it was dependent on the carbon market. The price of carbon has gone way down and the market is no longer functioning as it should. (ID08)

And second:

> Some international organisations would prefer to funnel funds through regional organisations because of the varied management of those funds in various jurisdictions. (ID13)

Connected to this idea, one interviewee said that regional "organisations such as the 5Cs are largely donor-driven. Donors decide what they can and can't fund and where they can and can't work" (ID19). These issues aside, one policy-maker noted:

> Attempts are being made to better structure finance with the GCF [Green Climate Fund]. New funds are now friendlier to developing countries. Direct access allows you to do away with all the executing agencies. (ID08)

These views suggest that policy-makers in the Caribbean have many concerns relating to international adaptation financing. These include country eligibility for financing, and fluctuations in the carbon market, which are affecting the availability of grant financing. Despite these concerns, policy-makers acknowledge that new funds such as the GCF are more developing-country-friendly and that monies are indeed available to help SIDS develop adaptation policies and programs, once they seek them out.

Discussion

Depoliticising climate change and prioritising good governance in Caribbean SIDS

This study's analysis of countries' National Communications to the UNFCCC reveals that reported climate change adaptation limits are mainly finance-related. This is largely supported by the interview data, though some policy-makers do not agree that financing is a limit. The study also highlights a mismatch between the perceived social limits to adaptation and the amount of social adaptations being undertaken—Caribbean SIDS reported neither social adaptations nor adaptations in the social sector. Where social adaptations are concerned, it is important to target the right issues (Larson, 2010). In the case of the Caribbean, interviews suggest that these concerns relate to depoliticising climate change and prioritising good governance. Interviewees highlighted the historical role that politics plays in thwarting efforts towards environmental sustainability in the region, even though "climate change is long range and politics [i.e., the political cycle] is every five years" (ID01). Authors such as Smith and Rhiney (2016) draw attention to the role of political factors in driving vulnerability, which must be circumvented if climate change is to be depoliticised. Interviewees spoke of, for example, resistance from Members of Parliament when the relocation of constituents from vulnerable locations is required (ID01). They also spoke of the "politics of patronage" that has been a feature of Jamaican public life since the 1970s (ID24). One policy-maker acknowledged, "We're slowly getting government buy-in but both sides [i.e., Government and Opposition] need to agree" (ID01). This has not been helped by the fact that "There is a perception among private sector and other stakeholders that climate change is the [responsibility of the] Government" (ID14), which points to misperceptions about roles and responsibilities as well as the need to increase stakeholder awareness. Ford and King (2015) and Sherman and Ford (2013) also draw attention to the importance of broad stakeholder engagement in adaptation actions at various scales. Additionally, in the Caribbean, "Governments prefer to articulate strategies from an economic perspective rather than a climate change perspective" (ID26), and policy-makers "are trying to emphasise that climate change is not an environment challenge but a development challenge" (ID19).

In view of the above points, "Priming the governance system for climate change adaptation" in Caribbean SIDS is crucial (Baird et al., 2014, p. 1). For Middelbeek et al. (2014, p. 143), "A proper analysis of CC [climate change] governance, therefore, requires an institutional examination that focuses on internal processes, external relationships, and linkages with different social groups and households." While a detailed institutional analysis is beyond the scope of this paper, a number of broad perspectives on governance can be deduced from the interviews conducted as part of this study. ID19, for example, referenced the Caribbean's sub-optimal performance on Transparency International's Corruption Perceptions Index. The 2016 Index results reveal that the Caribbean may not entirely be a poor performer. The Bahamas ranks fourth best in the Americas, behind Canada, the United States, and Uruguay, and 24th in the world (Transparency International, 2017). The results also show that, of the 13 Caribbean SIDS sampled, perceptions of corruption in the Dominican Republic and Haiti were the worst (see Figure 5, below). Comparing these results to 2014, perceptions in five countries had improved (Cuba, Dominica, Haiti, Jamaica, and Suriname), but worsened in six (the Bahamas, Barbados, the Dominican Republic, Guyana, St. Vincent and the Grenadines, and Trinidad and Tobago). Though perceptions are not always a reflection of reality, the results indicate that there is still work to be done.

No.	Country	2016 Rank	2016 Score	2014 Score	Comparison (2014 vs. 2016)
1	Bahamas	24	66	71	↓
2	Barbados	31	61	74	↓
3	St. Lucia	35	60	-	-
4	St. Vincent and the Grenadines	35	60	67	↓
5	Dominica	38	59	58	↑
6	Grenada	46	56	-	-
7	Cuba	60	47	46	↑
8	Suriname	64	45	36	↑
9	Jamaica	83	39	38	↑
10	Trinidad and Tobago	101	35	38	↓
11	Guyana	108	34	30	↓
12	Dominican Republic	120	31	32	↓
13	Haiti	159	20	19	↑

Figure 5: Corruption Perceptions Index—Caribbean SIDS. (© Stacy-ann Robinson; based on Transparency International, 2017)

Improving access to international adaptation financing for Caribbean SIDS

This study finds that finances account for 15% of adaptation limits reported by Caribbean SIDS in their National Communications. One interviewee, however, admitted:

> We know a lot of that money is going to waste. 10% of the population [in Jamaica] pays income tax. There is a lot of tax evasion. There's a reason why the government has no money. (ID01)

The study further confirms, through an analysis of OECD data, that 67% of total principal adaptation financing to the region was committed to one country: the Dominican Republic. This suggests that many Caribbean SIDS are missing out on principal financing. It also shows that allocations across SIDS are skewed, a conclusion also drawn by Betzold and Weiler (2017) and Donner et al. (2016), who study adaptation financing, primarily to Pacific SIDS. So why is this the case in the Caribbean? First, some countries may be more adept at securing funds. One civil servant noted that "If you don't use the words 'climate change', you won't get the funding" (ID01), hinting at the idea that environment and/or development project proposals are being labelled as climate change projects as a way of attracting funding. Second, some countries may be better organised than others. According to another civil servant, "We don't have dedicated funding in St Lucia as in Jamaica with a dedicated Climate Change Ministry [at the time]—Jamaica is one of the few countries that have been able to do that" (ID14). Third, some countries may not be able to meet donors' co-financing requirements, meaning that entire grant amounts do not, in fact, trickle down to recipient countries. As one official explained:

> There are tensions between the COP [i.e., the UNFCCC Conference of the Parties] and the GEF [Global Environment Facility] Council regarding their requirements for in-kind and monetary contributions. Also, when they take a percentage as management fees. So you can't hire the most competent people and some countries had to 'top up' the amounts for management. (ID08)

Considering the points above, what can Caribbean SIDS do to improve their access to international climate change adaptation financing? Some policy-makers suggested that governments across the region need to change their way of thinking (ID01, ID05-06, ID19-20, ID23-26). Connected to this is the view that:

> You can't do little micro projects. You have to think big disasters now. We have to think with bigger ideas to get the money and the problem is that everybody wants to see results now and climate change is a long range thing. (ID01)

But, more broadly, how can access be improved? Afful-Koomson (2015) and Bird (2014), among others, explore a range of options that deal primarily with the structure of international funds such as the GCF. For interviewees, the type of financing available (i.e., grants vs loans) is key: there is a strong preference for grant financing. According to one interviewee, "Grants … that is what we will need to help us" (ID13). Another consideration is the economic classification of Caribbean SIDS. Twelve of the 29 Caribbean SIDS (41%) are currently listed as high-income economies by the World Bank, meaning they have a per capita gross national income (GNI) that exceeds US$12,475 (World Bank, 2016). These countries are Antigua and Barbuda, the Bahamas, Barbados, Bermuda, the British Virgin Islands, the Cayman Islands, Puerto Rico, Sint Maarten, St. Kitts and Nevis, Trinidad and Tobago, Turks and Caicos Islands, and the United States Virgin Islands (World Bank, 2016). The other 16 countries, except Haiti, are all upper-middle-income economies (55%) with a per capita GNI of between US$4,036 and $12,475 (World Bank, 2016). Haiti is a low-income economy, earning less than US$1,025 per capita (World Bank, 2016). One interviewee highlighted that countries such as the Bahamas "cannot access some funding sources because of their economic classification" (ID13). Also, "some of the countries accessing loans [for climate change adaptation] already have a high debt burden" (ID13). While per capita income has been shown to be positively correlated with the volume of aid received (see, e.g., Feeny & McGillivray, 2010; Wall, 1995), the interrelated and complex nature of the vulnerabilities of SIDS needs to be taken into account in allocation decisions rather than basing these primarily on national incomes.

Making the road (to a climate-resilient future in Caribbean SIDS) by walking

This study finds that policy-makers in Caribbean SIDS generally recognise the need to build resilience into natural and human systems in order to adequately adapt to climate change (e.g., ID01, ID10-11, ID15-16, ID21-22). Tompkins and Adger (2004) support building resilience as a way to cope with environmental change. Building resilience, however, may be easier said than done: Adger et al. (2011, p. 762) observe "sensitivity to the impacts of policy responses" alongside the "high level of flexibility in future responses, which are continually evolving." Despite this, increasing resilience in a SIDS context is possible. However, can the same be said for a climate-resilient future? One interviewee suggested "making the road by walking" (ID26), mimicking the name of a 2014 book by Brian McLaren, which offers "a simple curriculum of *insightful reflections* and *transformative practices*" for a "reintroduction to Christian faith" (emphases added) (McLaren, 2014, p. xi). Interviewees had some insightful reflections and suggestions for transformative practices, which, following Adger et al. (2011), could be seen as sources of or platforms for building a climate-resilient future.

For some policy-makers, the quest for resilience and sustainable development has both advantages and disadvantages; officials called it a "catch 22" (ID02-03, ID24-26):

> The whole idea of resilience is that you build redundancy and independence into the system […] In Jamaica, if power goes down, our water system also goes down. In the quest for modernity, we stopped relying on springs in local communities and started pumping water, which requires power. It just doesn't make any sense. (ID24)

Another official shared that:

> Instead of importing all of these [climate adaptation] strategies, we should focus on home-grown strategies. We need to think about food security and the principle of equifinality [i.e., that there are many means to the same end]. (ID26)

The latter view aligns with the literature that focusses on incorporating local and traditional knowledge into adaptation. Mercer et al. (2014) specifically examine this in the context of food security in Atlantic and Indian Ocean SIDS. The authors find a lack of coherence in "approaching food security, in terms of policies and actions not reflecting the ecosystem-food-climate nexus" and "the infrequency with which knowledge integration occurs" (Mercer et al., 2014, p. 5566) (see also Shah and Dulal, 2015). Further, London (2004, p. 491), in discussing the implications of climate change for 12 Caribbean SIDS, acknowledges more broadly the need for an "institutional and managerial framework that incorporates dynamic change into individual and collective decision-making processes." While "Some countries are better organised than others" (ID19), it is important to "look for 'win-win' options that reduce exposure and build resilience" (ID01). These 'win-win' options include "Not making climate change the sole issue" (ID01), developing and using "a matrix for top priorities [e.g., a probability impact matrix] [to] determine how and what to respond to" (ID24), and noting that:

> The key is how we do planning and regulation. We need to think about our centres of human population, transportation. We need a master plan. (ID01)

Conclusion

This paper had two aims. First, it identified trends in how SIDS in the Caribbean region are adapting to climate change at the national level. Second, it identified the phenomena seen as the primary limits to adaptation at the national policy level in these countries. In applying a resilience lens and using summative content analysis techniques and semi-structured interviews with 26 senior policy-makers, this paper found that Caribbean SIDS are mostly adapting to changes in hurricane, rainfall, and drought patterns, and that most adaptations are being undertaken in the coastal zone, water, and agriculture sectors. It further found that there are many factors limiting national-level adaptation: the most commonly reported limit is financing, though not all policy-makers agree that financing is a limit. These findings are important for national SIDS governments and international donors and agencies that will be better able to identify and fill gaps in their adaptation actions and financing. This paper's findings will also help them to better understand the perspectives of policy-makers on these issues.

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References

Adger, W.N., Brown, K., Nelson, D.R., Berkes, F., Eakin, H., Folke, C., Galvin, K., Gunderson, L., Goulden, M., O'Brien, K., Ruitenbeek, J., & Tompkins, E.L. (2011).

Resilience implications of policy responses to climate change. *Wiley Interdisciplinary Reviews: Climate Change*, 2(5), 757-766. https://doi.org/10.1002/wcc.133

Adger, W.N., & Vincent, K. (2005). Uncertainty in adaptive capacity. *Comptes Rendus Geoscience*, 337(4), 399-410. https://doi.org/10.1016/j.crte.2004.11.004

Afful-Koomson, T. (2015). The Green Climate Fund in Africa: what should be different? *Climate and Development*, 7(4), 367-379. https://doi.org/10.1080/17565529.2014.951015

Bahadur, A., Ibrahim, M., & Tanner, T. M. (2010). *The resilience renaissance? Unpacking of resilience for tackling climate change and disasters*. Brighton: Institute of Development Studies.

Baird, J., Plummer, R., & Pickering, K. (2014). Priming the governance system for climate change adaptation: The application of a social-ecological inventory to engage actors in Niagara, Canada. *Ecology and Society*, 19(1), 1-11. https://doi.org/10.5751/ES-06152-190103

Barnett, J. (2001). Adapting to climate change in Pacific island countries: The problem of uncertainty. *World Development*, 29(6), 977-993. https://doi.org/10.1016/S0305-750X(01)00022-5

Berrang-Ford, L., Ford, J.D., & Paterson, J. (2011). Are we adapting to climate change? *Global Environmental Change*, 21(1), 25-33. https://doi.org/10.1016/j.gloenvcha.2010.09.012

Betzold, C., & Weiler, F. (2017). Allocation of aid for adaptation to climate change: Do vulnerable countries receive more support? *International Environmental Agreements: Politics, Law and Economics*, 17(1), 17-36. https://doi.org/10.1007/s10784-016-9343-8

Bird, N. (2014). *Improving access to international climate finance within sub-Saharan Africa*. London: Overseas Development Institute.

Cambers, G. (2009). Caribbean beach changes and climate change adaptation. *Aquatic Ecosystem Health & Management*, 12(2), 168-176. https://doi.org/10.1080/14634980902907987

CARIBSAVE Partnership (2012). *CARIBSAVE climate change risk profile for Jamaica*. Christ Church, Barbados: CARIBSAVE Partnership.

Cashman, A., Nurse, L., & John, C. (2010). Climate change in the Caribbean: the water management implications. *The Journal of Environment & Development*, 19(1), 42-67. https://doi.org/10.1177/1070496509347088

CCCCC (2015). About CCCCC. *Caribbean Community Climate Change Centre*. http://www.caribbeanclimate.bz/about-us/about-us.html

Clayton, A. (2009). Climate change and tourism: the implications for the Caribbean. *Worldwide Hospitality and Tourism Themes*, 1(3), 212-230. https://doi.org/10.1108/17554210910980576

Day, O., van Proosdij, D., Campbell, D., Lee, S., Baker, G., & Thomas, J. (2016). *Building capacity for coastal ecosystem-based adaptation in small island developing states (SIDS): assessing climate vulnerability in Grenada and responding with coastal ecosystem-based adaptation action*. Nairobi: CARIBSAVE Partnership.

Donner, S.D., Knutson, T.R., & Oppenheimer, M. (2007). Model-based assessment of the role of human-induced climate change in the 2005 Caribbean coral bleaching event. *Proceedings of the National Academy of Sciences of the United States of America*, 104(13), 5483-5488. https://doi.org/10.1073/pnas.0610122104

Donner, S.D., Kandlikar, M., & Webber, S. (2016). Measuring and tracking the flow of climate change adaptation aid to the developing world. *Environmental Research Letters*, 11(5), 1-9. https://doi.org/10.1088/1748-9326/11/5/054006

Feeny, S., & McGillivray, M. (2010). Aid and growth in small island developing states. *The journal of development studies*, 46(5), 897-917. https://doi.org/10.1080/00220381003623889

Foley, A.M. (2010). Uncertainty in regional climate modelling: a review. *Progress in Physical Geography*, 34(5), 647-670. https://doi.org/10.1177/0309133310375654

Ford, J.D., & King, D. (2015). A framework for examining adaptation readiness. *Mitigation and Adaptation Strategies for Global Change*, 20(4), 505-526. https://doi.org/10.1007/s11027-013-9505-8

Gallopín, G.C. (2006). Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change*, 16(3), 293-303. https://doi.org/10.1016/j.gloenvcha.2006.02.004

Hay, J.E. (2013). Small island developing states: coastal systems, global change and sustainability. *Sustainability Science*, 8(3), 309-326. https://doi.org/10.1007/s11625-013-0214-8

Hughes, D.M. (2013). Climate change and the victim slot: From oil to innocence. *American Anthropologist*, 115(4), 570-581. https://doi.org/10.1111/aman.12044

IPCC (2014). Annex II: Glossary. In V.R. Barros, C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L. White (Eds.) *Climate change 2014: Impacts, adaptation, and vulnerability. Part B: Regional aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1757-1776). Cambridge & New York: Cambridge University Press.

Jury, M.R., & Winter. A. (2010). Warming of an elevated layer over the Caribbean. *Climatic Change*, 99(1), 247-259. https://doi.org/10.1007/s10584-009-9658-3

Klein, R.J.T., Midgley, G.F., Preston, B.L., Alam, M., Berkhout, F.G.H., Dow, K., & Shaw, M.R. (2014). Adaptation opportunities, constraints, and limits. In V.R. Barros, C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L. White (Eds.) *Climate change 2014: Impacts, adaptation, and vulnerability. Part B: Regional aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 899-943). Cambridge & New York: Cambridge University Press.

Larson, S. (2010). Understanding barriers to social adaptation: are we targeting the right concerns? *Architectural Science Review*, 53(1), 51-58. https://doi.org/10.3763/asre.2009.0103

Lesnikowski, A.C., Ford, J.D., Berrang-Ford, L., Barrera, M., & Heymann, J. (2015). How are we adapting to climate change? A global assessment. *Mitigation and Adaptation Strategies for Global Change*, 20(2), 277-293. https://doi.org/10.1007/s11027-013-9491-x

London, J.B. (2004). Implications of climate change on small island developing states: experience in the Caribbean region. *Journal of Environmental Planning and Management*, 47(4), 491-501. https://doi.org/10.1080/0964056042000243195

Mahon, R., & Fanning, L. (2016). Linking Caribbean ocean governance efforts to global arrangements. *Social and Economic Studies*, 65(1), 107-130.

Manyena, S.B. (2006). The concept of resilience revisited. *Disasters*, 30(4), 434-450. https://doi.org/10.1111/j.0361-3666.2006.00331.x

McEvoy, D., Fünfgeld, H., & Bosomworth, K. (2013). Resilience and climate change adaptation: The importance of framing. *Planning Practice & Research*, 28(3), 280-293. https://doi.org/10.1080/02697459.2013.787710

McLaren, B. (2014). *We make the road by walking: a year-long quest for spiritual formation, reorientation, and activation*. New York: Jericho.

Mercer, J., Kelman, I., Do Rosario, F., De Deus de Jesus Lima, A., Da Silva, A., Beloff, A.M., & McClean, A. (2014). Nation-building policies in Timor-Leste: Disaster risk reduction, including climate change adaptation. *Disasters*, 38(4), 690-718. https://doi.org/10.1111/disa.12082

Middelbeek, L., Kolle, K. & Verrest, H. (2014). Built to last? Local climate change adaptation and governance in the Caribbean: the case of an informal urban settlement in Trinidad and Tobago. *Urban Climate*, 8(0), 138-154. https://doi.org/10.1016/j.uclim.2013.12.003

Muñoz, M.M., Stimola, M.A., Algar, A.C., Conover, A., Rodriguez, A.J., Landestoy, M.A., Bakken, G.S., & Losos, J.B. (2014). Evolutionary stasis and lability in thermal physiology in a group of tropical lizards. *Proceedings of the Royal Society B: Biological Sciences*, 281(1778), 1-9. https://doi.org/10.1098/rspb.2013.2433

Mycoo, M. (2014). Sustainable tourism, climate change and sea level rise adaptation policies in Barbados. *Natural Resources Forum*, 38(1), 47-57. https://doi.org/10.1111/1477-8947.12033

Mycoo, M. (2007). Diagnosis of Trinidad's water problems (mid-1980s to mid-1990s). *Water Policy*, 9(1), 73-86. https://doi.org/10.2166/wp.2006.062

Nurse, L.A., McLean, R.F., Agard, J., Briguglio, L.P., Duvat-Magnan, V., Pelesikoti, N., Tompkins, E., & Webb, A. (2014). Small islands. In V.R. Barros, C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L. White (Eds.) *Climate change 2014: Impacts, adaptation, and vulnerability. Part B: Regional aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1613-1654). Cambridge & New York: Cambridge University Press.

OECD (2015). Official development assistance—definition and coverage. *Organisation for Economic Co-operation and Development*. http://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm

OECD (2011). Trade openness. *Organisation for Economic Co-operation and Development*. http://www.oecd-ilibrary.org/

Osbahr, H. (2007). Building resilience: adaptation mechanisms and mainstreaming for the poor. In *Human Development Report 2007/2008—fighting climate change: human solidarity in a divided world*. New York: United Nations Development Programme.

Oxenford, H.A., Roach, R., Brathwaite, A., Nurse, L., Goodridge, R., Hinds, F., Baldwin, K., & Finney, C. (2007). Quantitative observations of a major coral bleaching event in Barbados, Southeastern Caribbean. *Climatic Change*, 87 (3), 435. https://doi.org/10.1007/s10584-007-9311-y

Palanisamy, H., Becker, M., Meyssignac, B., Henry, O., & Cazenave, A. (2012). Regional sea level change and variability in the Caribbean sea since 1950. *Journal of Geodetic Science*, 2(2), 125-133. https://doi.org/10.2478/v10156-011-0029-4

Pantin, D.A. (1999). The challenge of sustainable development in small island developing states: case study on tourism in the Caribbean. *Natural Resources Forum*, 23(3), 221-233. https://doi.org/10.1111/j.1477-8947.1999.tb00911.x

Pauw, W.P. (2014). Not a panacea: private-sector engagement in adaptation and adaptation finance in developing countries. *Climate Policy*, 15(5), 583-603. https://doi.org/10.1080/14693062.2014.953906

Rawlins, S.C., Chen, A., Rawlins, J.M., Chadee, D.D., & Legall, G. (2007). A knowledge, attitude and practices study of the issues of climate change/variability impacts and public health in Trinidad and Tobago, and St. Kitts and Nevis. *West Indian Medical Journal*, 56(2), 115-121.

Robinson, S. (2017). Climate change adaptation trends in small island developing states. *Mitigation and Adaptation Strategies for Global Change*, 22(4), 669-691. https://doi.org/10.1007/s11027-015-9693-5

Robinson, S., & Dornan, M. (2017). International financing for climate change adaptation in small island developing states. *Regional Environmental Change*, 17(4), 1103-1115. https://doi.org/10.1007/s10113-016-1085-1

Robinson, S., & Gilfillan, D. (2017). Regional organisations and climate change adaptation in small island developing states. *Regional Environmental Change*, 17(4), 989–1004. https://doi.org/10.1007/s10113-016-0991-6

Rockwell, S.M., Bocetti, C.I., & Marra, P.P. (2012). Carry-over effects of winter climate on spring arrival date and reproductive success in an endangered migratory bird, Kirtland's warbler (Setophaga Kirtlandii). *Auk*, 129(4), 744-752. https://doi.org/10.1525/auk.2012.12003

Roson, R. (2014). Development of a modelling framework in support of an assessment of the economic and social impacts of climate change in the Caribbean. In *ECLAC—Studies and Perspectives Series—the Caribbean*. Santiago: United Nations Economic Commission for Latin American and the Caribbean.

Saxena, A., Qui, K., & Robinson, S. (2017). Knowledge, attitudes and practices of climate adaptation actors towards resilience and transformation in a 1.5°C world. *Environmental Science & Policy*, 1-8. https://doi.org/10.1016/j.envsci.2017.11.001

Schleupner, C. (2008). Evaluation of coastal squeeze and its consequences for the Caribbean island Martinique. *Ocean & Coastal Management* 51(5), 383-390. https://doi.org/10.1016/j.ocecoaman.2008.01.008

Shah, K.U., & Dulal, H.B. (2015). Household capacity to adapt to climate change and implications for food security in Trinidad and Tobago. *Regional Environmental Change*, 15(7), 1379-1391. https://doi.org/10.1007/s10113-015-0830-1

Sherman, M.H., & Ford, J. (2013). Stakeholder engagement in adaptation interventions: an evaluation of projects in developing nations. *Climate Policy*, 14(3), 417-441. https://doi.org/10.1080/14693062.2014.859501

Smith, R.A.J., & Rhiney, K. (2016). Climate (in)justice, vulnerability and livelihoods in the Caribbean: the case of the indigenous Caribs in northeastern St. Vincent. *Geoforum*, 73(0), 22-31. https://doi.org/10.1016/j.geoforum.2015.11.008

Stadelmann, M, Timmons Roberts, J., & Michaelowa, A. (2011). New and additional to what? Assessing options for baselines to assess climate finance pledges. *Climate and Development*, 3(3), 175-192.

Thorpe, R.S., Barlow, A., Malhotra, A., & Surget-Groba, Y. (2015). Widespread parallel population adaptation to climate variation across a radiation: Implications for adaptation to climate change. *Molecular Ecology*, 24(5), 1019-1030. https://doi.org/10.1111/mec.13093

Tompkins, E.L., & Adger, W.N. (2004). Does adaptive management of natural resources enhance resilience to climate change? *Ecology and Society*, 9(2), 1-14.

Tompkins, E.L. (2005). Planning for climate change in small islands: Insights from national hurricane preparedness in the Cayman Islands. *Global Environmental Change*, 15(2), 139-149.

Transparency International (2017). Corruption Perceptions Index 2016. *Transparency International*. http://www.transparency.org/news/feature/corruption_perceptions_index_2016#table

UN-OHRLLS (2011). Small island developing states: Small island, big(ger) stakes. New York: United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

Vergara, W., Rios, A.R., Galindo, L.M., & Samaniego, J. (2015). Physical damages associated with climate change impacts and the need for adaptation actions in Latin America and the Caribbean. In W.L. Filho (Ed.) *Handbook of climate change adaptation* (pp. 479–491). Berlin: Springer-Verlag Berlin Heidelberg.

Wall, H.J. (1995). The allocation of official development assistance. *Journal of Policy Modeling* 17(3), 307–314. https://doi.org/10.1016/0161-8938(94)00031-A

World Bank (2016). World Bank country and lending groups. World Bank, accessed May 3, 2017. https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

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Social adaptability in ecotones: sea-level rise and climate change adaptation in Flushing and the Isles of Scilly, UK

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ABSTRACT: Coastal zones and small islands are among the areas most impacted by global climate change and face great challenges for adaptation. While being considered as particularly vulnerable, many coastal communities, nevertheless, have long traditions of living not only *by* but *with* the sea. If such ecotones—places where ecosystems intersect—have features distinct from purely continental regions, the question is how life with the shore translates into adaptability towards environmental change. Life at the shore shapes emergent social relationships, local traditions, and collective memory. At the same time, issues such as tourism development, demographic change, and national and international administrations influence how environmental challenges in coastal areas are addressed. In this paper, I analyse how place-specific social structures and conflicting influences in ecotones affect adaptability to sea-level rise in coastal areas. This research draws on quantitative and qualitative data from a comparative study of two case studies, a coastal town and an archipelago, in Southwest England.

Keywords: aquapelago, climate change adaptation, community resilience, ecotones, islands, sea-level rise, social capital, Southwest England

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1. Introduction

Referring to the coastal shore, and islands, in particular, Gillis (2014, p. 164) wrote in the *Island Studies Journal* that "now we are beginning to appreciate the centrality of the marginal" both in natural sciences and humanities. Thus, Gillis (2012, 2014) suggests applying the concept of ecotones to social systems. Ecotones describe "places where ecosystems intersect, overlap and exist in creative tension with one another" (Gillis, 2014, p. 155), such as the intertidal zone. In island and coastal communities, the relationship of people to their coastal environment is a significant factor in shaping people's perception and behaviour. How does this overlapping and the tension of ecosystems affect people living in and depending on the resources in coastal zones? Can they contribute to a place-specific resilience in times of environmental change?

Climate change is a significant challenge for coastal regions and small islands (Nurse et al., 2014). Sea-level rise, in particular, already shows impacts of ongoing coastal erosion. Projections suggest a further rise in sea level up to a metre by the end of the 21st century (IPCC, 2013). This would lead to increased flooding and land loss and force societies to adapt. Besides technical adaptation measures, such as seawalls, groynes, and sand nourishment, migration or relocation may also be necessary. In any case, adaptation is a social challenge. Strategies and policies have social implications and rely on public support. In addition to top-down approaches, bottom-up approaches, especially community action, are a valuable asset for increasing community resilience to sea-level rise.

Issues such as levels of trust, social networks, and norms—social capital—are indicators of social cohesion, which can contribute to a society's adaptability to environmental (climate)

change (Adger, 2003; Pelling, 2011). Social capital may become particularly relevant in small and isolated communities, where institutionalised structures are weak. Moreover, different types of social capital, i.e., so-called bonding, linking, networking social capital, allow access to different kinds of resources (Woolcock, 2001). Therefore, it is important to consider not only a community's endogenous structures, but also its setting and external relationships.

The main research question, in relation to the concept of ecotones, is: How do place-specific social features in coastal zones affect community adaptability to sea-level rise?

Small islands provide useful case studies for an inquiry concerning ecotones. It is, however, unclear whether small islands are, in fact, special cases. Many places which are not located on small islands share similar issues of isolation and scale (Kerr, 2005) and have a strong maritime identity. I present the empirical findings from two case studies, of which one is a small archipelago (the Isles of Scilly) and the other is a small coastal village (Flushing). Both are located in the southwest of the United Kingdom. The comparative study is possible here because both are located in the same cultural region with similar political circumstances, and both are affected by sea-level rise.

Section 2 focusses on the theoretical background framing adaptation and resilience from a complexity perspective, combined with features of social capital and in a context of ecotones. Section 3 gives a brief overview of quantitative and qualitative research methods applied in the two case study sites. On this basis, Section 4 presents the empirical findings related to vulnerability and adaptability of the two case studies and explains similarities and differences. A discussion of the results in Section 5 includes the wider context of coastal zones and small islands in times of climate change, before a conclusion in Section 6.

2. Resilience, social capital, and ecotones

In this paper, I combine the approaches of community resilience and social capital with the concept of ecotones. According to Gillis (2012), the intertidal zone and the interaction with both the marine and terrestrial environment have historically been crucial for human development. Islands are a suitable example of ecotones because they are so dominantly shaped by the two ecosystems. However, place-based coastal communities on continents also fall into this category.

Hayward's concept of the 'aquapelago'—in contrast to the term 'archipelago'—stresses the marine aspect of island formations as well as interactions between the marine and terrestrial. An aquapelago is:

> a social unit existing in a location in which the aquatic spaces between and around a group of islands are utilised and navigated in a manner that is fundamentally interconnected with and essential to the social group's habitation of land and their senses of identity and belonging (Hayward, 2012, p. 5).

The marine environment is, therefore, an essential part of island (and archipelago) identity (cf. Hau'ofa, 1993). However, Hayward also stresses that aquapelagos are "innately linked to and dependent on finite terrestrial resources and constantly react to and work within the transitional zone between land and sea" (Hayward, 2012, p. 1). This latter aspect, similar to the ecotone concept, might therefore add to the general understanding of place-based coastal societies and their interaction with the environment.

The concept of ecotones especially considers environmental changes such as climate change and associated sea-level rise as non-linear developments. In contrast, natural sciences dealing with such phenomena seem to stress positivist assumptions of predicting future realities of drowned landscapes. From a perspective of complexity theory, environmental changes are dynamic and unpredictable. This assumption does not make the development of scenarios as well as adaptation and mitigation strategies superfluous; it "does not negate their value in informing

society about possible futures. However, it does suggest that these models may not be preparing us for some possible responses" (Harrison & Stainforth, 2009, p. 111).

Accordingly, community resilience can be defined as "the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise" (Magis, 2010, p. 402). Community resilience is an important issue particularly for place-based communities, i.e., communities depending on a healthy environment for people's livelihoods (Berkes & Ross, 2013). In such communities, the most important ties and relationships are within the geographical community, rather than distant relationships (cf. Maida, 2007; Berkes & Ross, 2013, p. 13). Accordingly, they may possess a higher vulnerability to the impacts of environmental changes, because they have fewer alternatives to relocate. At the same time, such a reliance on the well-being of local environmental conditions may lead to a higher incentive for sustainable land management (Walker & Salt, 2006, p. 108). Therefore, acknowledgement of place-specific and societal features is essential for the understanding of adaptation challenges and options (Lyth et al., 2015).

Weichselgartner and Kelman (2015, p. 263) criticize that "too many resilience-building activities draw upon unchallenged assumptions about the social world, effectively imposing a technical-reductionist framework upon more complex webs of knowledge, values and meaning—and thus action." In fact, the elements that strengthen community resilience involve people's agency and capacity for self-organisation, e.g., values and beliefs, knowledge, skills, learning, leadership, people-place relationships, economic diversity, community infrastructure, efficient governance system, and social networks (Berkes & Ross, 2013, p. 14). In the context of climate change and sea-level rise, aspects such as the effective management of coastal resources, risk management, emergency response capacity, and disaster recovery systems are of particular significance (Rubinoff & Courtney, 2008). Hence, integrating both "environmental and societal contributions to resilience without neglecting the differences between environmental and societal characteristics" (Weichselgartner & Kelman, 2015, p. 263) is essential to place-based adaptation management.

The character and role of social relationships and features of social emergence, which can be analysed using the concept of social capital, also needs to be considered. According to Putnam et al. (1993, p. 167), social capital refers to "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions." So-called cognitive elements of social capital describe features such as norms of reciprocity, solidarity, and levels of trust. Structural elements of social capital include formal organisational structures and "networks of civic engagement" (Putnam et al., 1993, p. 174; cf. Krishna & Shrader, 1999). According to Arrow (2000, p. 4), the facilitation of building, maintaining, and strengthening relationships not only improves feelings of social cohesion and community identity but also somewhat incidentally strengthens trust in, and the efficiency of, institutions. How social capital can be relevant for different purposes can be understood by distinguishing different types of social capital. As Petzold (2016) shows, different types of social capital have different implications for access to resources relevant to adaptation. Moreover, the relevance of different types of social capital depends on the institutional setting, geographic conditions, and social and environmental history. So-called bonding social capital refers to family relationships and close friends, networking social capital refers to more distant relationships (e.g., associates and colleagues), and linking social capital involves connections to people and institutions beyond one's community (Woolcock, 2001, p. 13). Each type gives access to different kinds of resources and information, which can be relevant for different kinds of adaptation needs—e.g., financial, physical, informational.

Returning to the concept of ecotones, how do social relationships reflect the influence of both the marine and the terrestrial ecosystem? Moreover, what relevance could that have for community adaptability to environmental change? Gillis (2014, p. 160) suggests that "living with the shore" reflects the environmental features of ecotones by understanding the coast as a dynamic and connecting zone rather than as a border or barrier. For coastal management and climate change adaptation, this implies that people's perception and institutional concepts of the coast have to be considered and potentially

built upon. The relationship to and use of the coastal environment, for example, affects people's perception of risks (Ratter & Possekel, 2000). Milfont et al. (2014, p. 6) find that "proximity to the coast was associated with increased belief that climate change is real." An indicator for a community's perception of environment is "social memory" (Wilson, 2015), which in coastal zones can refer to the marine environment as well. Social memory involves shared experiences of environmental events which happened in the past but also involves coping mechanisms. Social memory is formed and preserved by language, literature, and stories, as well as by social capital through keeping up traditions and practices referring to the coastal environment, e.g., in clubs and social networks. Similarly, local knowledge is essential to increasing community resilience through providing skills and behavioural patterns adapted to specific local environmental conditions (cf. Mercer et al., 2012). Local knowledge is valuable in combination with social capital because it can help mobilise existing social capital into action for a specific purpose. Local knowledge, here, refers not only to traditional knowledge but also to knowledge and skills brought in by newcomers. Local knowledge is dynamic. While traditional knowledge refers to land management practices or disaster recovery mechanisms, 'new' local knowledge offers the potential to integrate new skills and ideas to the management of environmental changes, e.g., through linking social capital.

3. Methods

For the comparative study of two small coastal areas impacted by similar stressors and with similar social structures, a quantitative approach was both appropriate and feasible. During a field work phase in February/March 2014, a household survey was distributed to all households in the two communities. In Flushing, a drop-and-collect method was applied; in the Isles of Scilly, surveys were distributed in the same manner, but collected with collection boxes in central points of the respective islands. The survey 'Community and the Sea' included 27 questions on social capital, perception of risk, and attitude towards adaptation. Data for the quantitative survey in the Isles of Scilly was based on the research presented by Petzold (2017). The results from the Isles of Scilly were compared with those from Flushing and discussed from the perspective of ecotones.

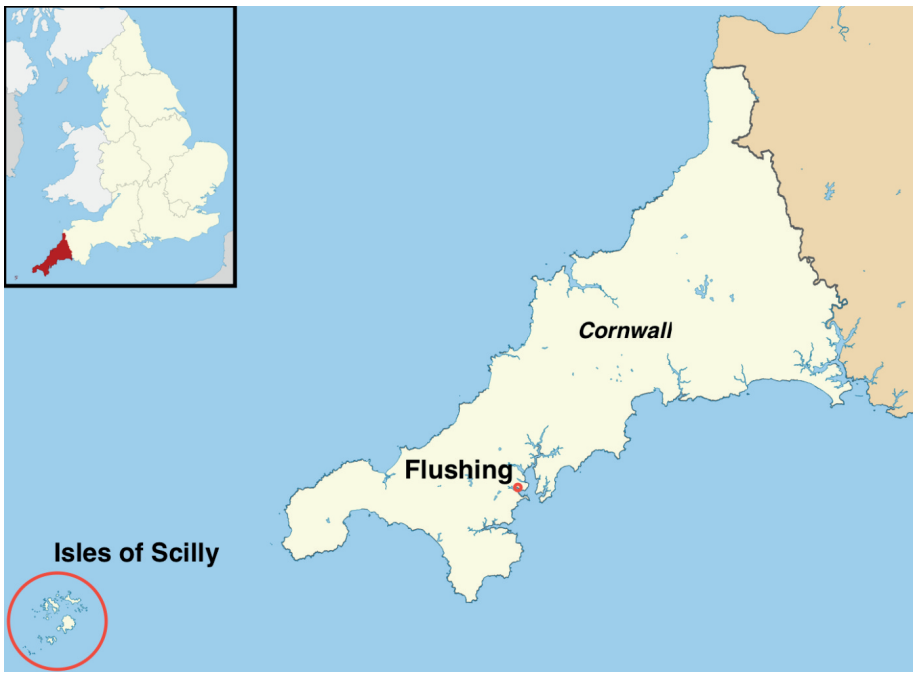

Figure 1: Map of Cornwall, with case study sites: the Isles of Scilly and Flushing. (Contains OS data © Crown copyright and database right, 2017)

Moreover, the quantitative approach is complemented by participant observation and stakeholder interviews. In Flushing, this involved a semi-structured interview with a representative from the local council, non-structured interviews with local inhabitants, and several observations of erosion and post-flooding conditions of the town. For an extended analysis of the qualitative research approach in the Isles of Scilly, see Petzold (2016).

4. Community-based adaptation in Flushing and the Isles of Scilly

The two case studies, two 'small' places in Southwest England (see Figure 1), were chosen for their vulnerability to sea-level rise as well as their features of scale and isolation. The relevance of the ecotone and social capital for adaptation, however, differs. In the following, I analyse the place-specific features in the selected case studies regarding social conditions, social capital, and adaptation.

Case study sites

The first case study is Flushing, a village of 670 inhabitants, located on the southern coast of Cornwall, one of the most peripheral counties in England. While Flushing itself is a small village that is not particularly well-connected with major transport links, it lies in proximity to the capital of Cornwall, Truro, and close to another centre of the region, Falmouth, which is located across the estuary of the Penryn River, on which Flushing is also located. The local marine and coastal ecosystem is shaped by the Fal Estuary with a tidal range of up to 5.7 metres. The estuary is designated as a Special Area of Conservation (SAC) and part of the Cornwall Area of Outstanding National Beauty (AONB). The warm seawater temperatures of the estuary's southwesterly location and the relatively low freshwater input provide habitats for a high diversity of marine species in flora and fauna, such as mearl and seagrass beds with bass, cuttlefish, and oyster populations, classified as Priority Habitats under the Natural Environment and Rural Communities Act 2006 (NERC) (Natural England, 2015).

Figure 2: Flushing, July 2014. (© Jan Petzold)

Flushing town was founded in the 17th century. The port (as a sub-port to Falmouth) was constructed by Dutch engineers who migrated from the Netherlands. Historically, the economy was based on shipbuilding, fishing (e.g., oysters), farming, and temporarily copper mining. However,

Flushing was originally a settlement for people working in the famous harbour of Falmouth. In particular, Flushing was used as a residential area for high-ranking captains from some of the ships docked at Falmouth (University of Portsmouth, n.d.). Today, the main source of income is tourism or employment in one of the main centres mentioned above. Part of Flushing is built at sea level and part is built up a slope (see Figure 2). Every spring tide causes flooding of the village centre, and the main road can hardly be used. Otherwise, storm events usually have limited impact on Flushing, due to its sheltered position with respect to the main wind directions.

The second case study, the Isles of Scilly, is an archipelago composed of five inhabited islands—one larger main island and four smaller so-called 'off-islands'—approximately 45 km off the southwest tip of Cornwall. All the islands are composed of granite rock and are shaped by the North Atlantic current, which results in relatively mild temperatures, as well as strong and frequent winter storms. The archipelago features a frequently changing coastline with raised beaches and drowned landscapes, which, at low tide (tidal range of up to 5.9 metres), reveal prehistoric field systems. In fact, until around 2000 BC, most of the islands were still connected as one big island (Mortimer et al., 2013). The legend of the mythical lost land of Lyonesse is said by some to refer to a submerged land connecting Cornwall and the Isles of Scilly (Mitchell, 2016). The coastal ecosystem of the Isles of Scilly is characterised by "distinctive flora and fauna with some species confined totally to the archipelago, […] nationally important coastal and heathland habitats, […] seabird populations" as well as "seagrass beds of international importance" (Isles of Scilly AONB, 2010, p. 42).

Historically, the Isles of Scilly have gone through different phases with shifting economic sectors dominating—including shipbuilding, fishing, subsistence agriculture, and flower farming. Today, as in Flushing, the key economic sector is tourism, while flower farming also remains an important business, for which the islands are famous. While, agriculture is no longer as relevant economically or as a subsistence resource as it once was, it still takes an important role in land stewardship. Legally, the Isles of Scilly are not part of Cornwall since they are a Unitary Authority. However, historically and culturally, they are closely connected to the mainland region. The five islands are inhabited by around 2,200 people (Office for National Statistics, 2011), with approximately two-thirds living on the main island, St Mary's, and concentrated there in Hugh Town. The key infrastructure and administration are also located in Hugh Town. The town is the lowest settlement, its centre being constructed on a sand bar (see Figure 3), and parts of Hugh Town are even below sea level. Storm events and flooding often affect the islands, but erosion is also a significant issue around the islands.

Figure 3: Hugh Town, September 2015. (© Jan Petzold)

	Flushing	**Isles of Scilly**
Survey response rate	26% (n=74)	21% (n=191)
Mean age	63 years	62 years
Born locally	7%	20%
Time living in x	21 years	32 years

Table 1: Survey, key figures.

Before analysing the challenges for the communities for adaptation to sea-level rise, the following section will describe some indicators of social capital in the respective case studies.

Social capital

Regarding the two case studies, social capital—i.e., levels of cooperation, trust, and social networks—is especially interesting if it shows particular patterns regarding the geographic and marine environment. Thus, pertinent questions here include how far collective action is explicitly or implicitly related to the coastal and marine environment, how far social relationships shape or are a product of a specific local maritime identity, and how far social networks cross the coastal 'border'.

The household survey received a relatively high response rate in both locations and reflects the high average age and a high ratio of incomers, although the latter factor applies slightly less to the Isles of Scilly (see Table 1).

It can generally be said that social capital is high in the two communities. Several indicators reflect a high degree of bonding social capital, i.e., high levels of trust and helpfulness (see Figure 4 and Figure 5). High levels of trust can be observed, for example—in the Isles of Scilly and partly also in Flushing—where people do not lock their front doors.

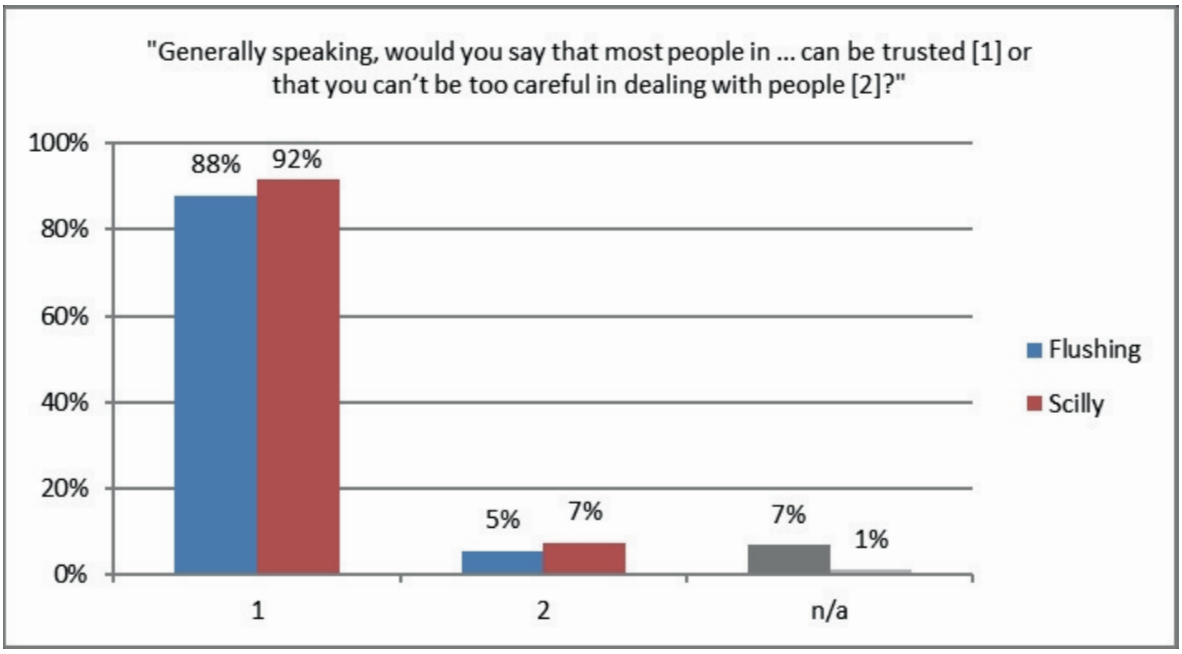

Figure 4: Perceived levels of trust in Flushing and the Isles of Scilly.

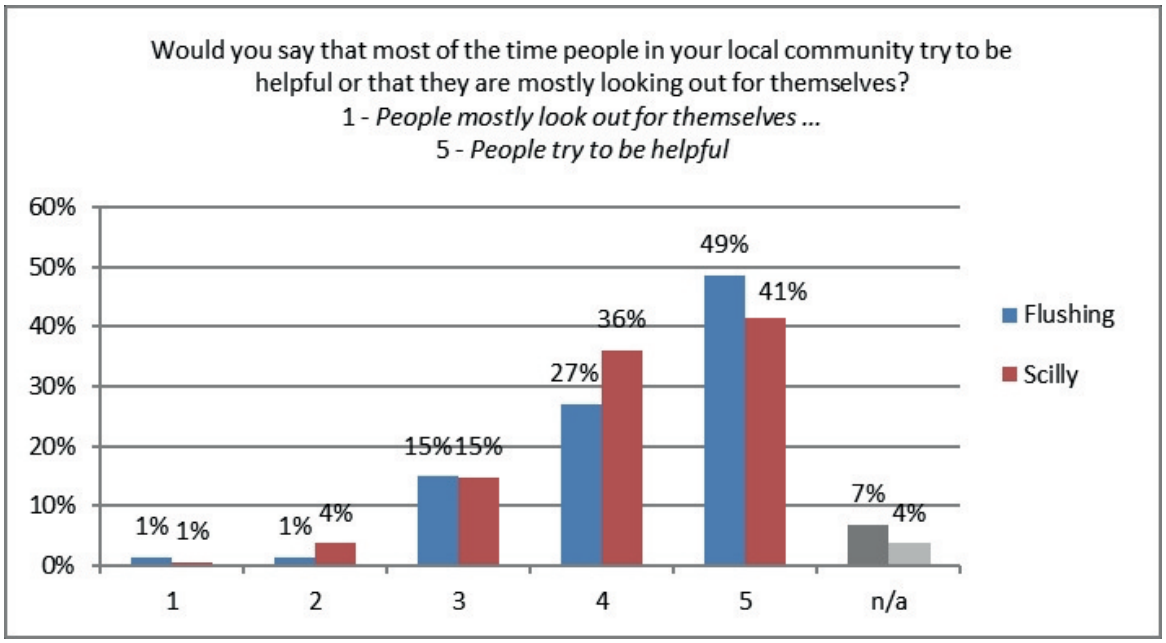

Figure 5: Perceived helpfulness in Flushing and the Isles of Scilly.

A more formal indicator for (networking) social capital is participation in clubs. The most popular clubs in both case studies involve gig rowing—a traditional water sport in Cornwall. Especially in the Isles of Scilly, membership of one of the many gig rowing clubs is high and plays an important role for community spirit, not only within one island, but through the many competitions across the whole archipelago.

Sports clubs, social clubs, and social spaces, such as pubs, provide arenas for bonding and networking social capital. People share information, knowledge, and possibly resources. High degrees of social capital allow for a higher capacity of collective action in a community, while, at the same time, joint activities strengthen social bonds and trust. In contrast to the Isles of Scilly, Flushing has further opportunities for clubs and events in nearby places, such as Falmouth or Truro. Schools and higher education institutions can also be reached more easily from Flushing than from the islands. Therefore, there is a higher degree of access to resources through linking social capital—more distant relationships with people outside one's community.

An issue affecting the social structure of both places is their high ratio of second-home owners. As mentioned above, tourism plays an important role in the communities' economies. Aside from seasonal tourism, day tourism or short-term tourism, for the last few decades more and more homes within the communities have been sold to people living in other parts of the country—possibly former tourists. These homeowners spend only part of the year, often the summer months, in the community and sometimes also rent out their homes to tourists. This results in a seasonal fluctuation of inhabitants and a certain degree of segregation. Often the places sold are the ones close to the shore—the most attractive and valued properties for the tourism sector (especially in Flushing). Also, many of the people who have bought property in Flushing or the Isles of Scilly are retired people, which explains the relatively high average age. These factors of a high average age, and changes in the economic focus from agriculture and fishing to tourism, have consequences for a community. When there is a lack of families and young and productive people, land management skills are lost and certain services cannot be offered any more, such as schools or a voluntary fire brigade (which is a particular problem on the small off-islands of the Isles of Scilly).

Sea-level rise and adaptation

Due to their low-lying geography, both Flushing and the Isles of Scilly are threatened by sea-level rise. In fact, sea-level records show an increasing trend in the region (see Figure 6 and Figure 7). Implications of further sea-level rise include increased impacts of tidal surges and associated flooding (see Figure 8), as well as coastal erosion. Especially in the Isles of Scilly, erosion is a concern for all five islands of the archipelago. Besides the main settlement, Hugh Town, which is located on an isthmus, relatively little high-value property is located at the coast, and so the main issue in the Isles of Scilly is the impact of storm surges and flooding. Ultimately, sea-level rise may make Hugh Town uninhabitable. In Flushing, sea-level rise would intensify the problem of flooding during high tides and cause problems for the infrastructure and housing in the town centre as well.

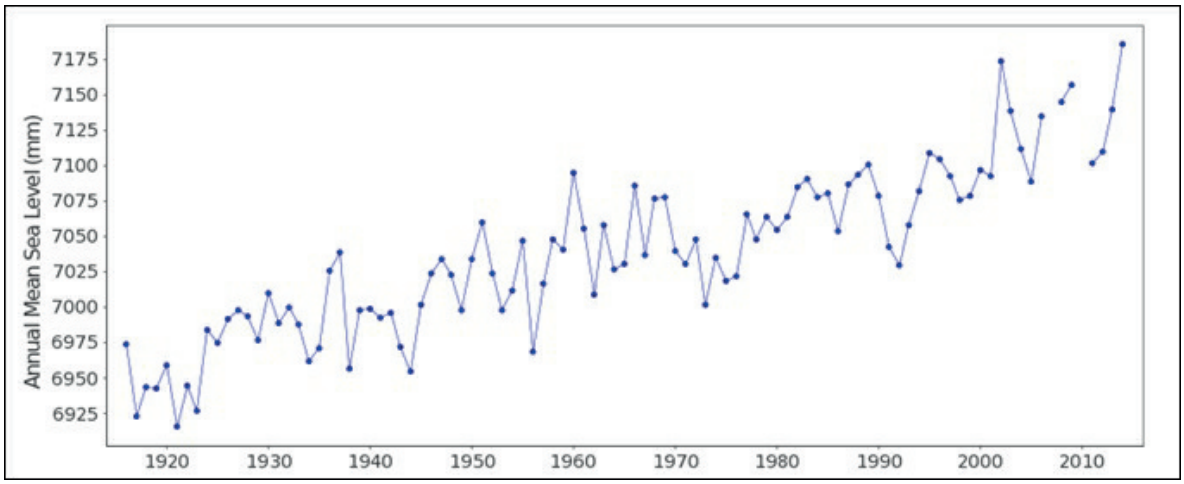

Figure 6: Annual mean sea levels since about 1920 in Newlyn, Cornwall. (Source: psmsl.org)

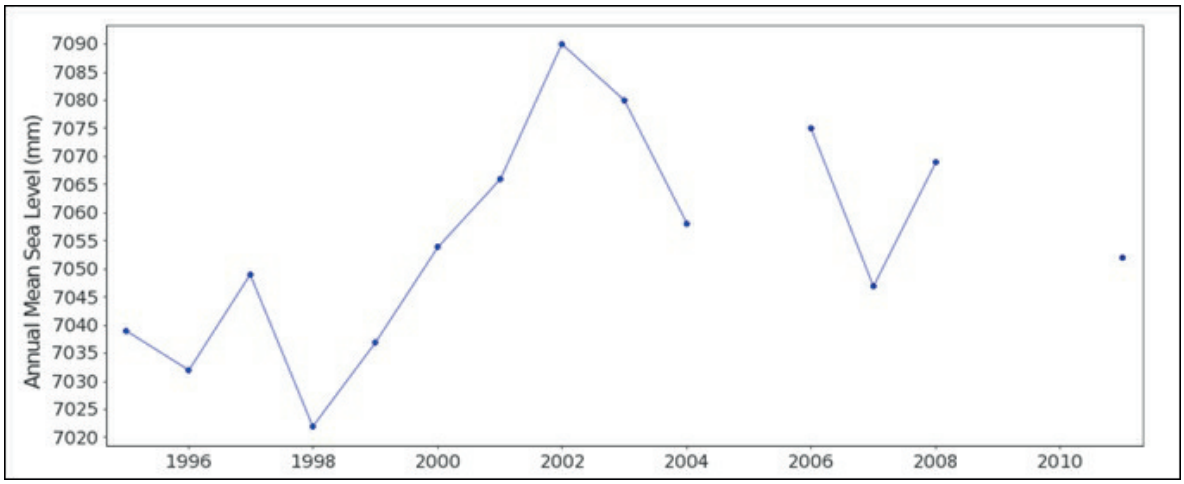

Figure 7: Annual mean sea levels since 1995 in St Mary's, Isles of Scilly. (Source: psmsl.org)

Figure 8: Storm surge hitting Hugh Town (left, © A. Martin, 2014); flooding in the town centre of Flushing (right, © S. Coles, 2014).

Although climate change projections lack precision for small localities such as the two case studies, both communities nevertheless have a high awareness of the risks associated with sea-level rise and coastal flooding (Figure 9); more than a third of both populations (Flushing: 36%, Isles of Scilly: 39%) would consider relocating. This is unsurprising in light of the strong storm events the Isles of Scilly are faced with every winter (and especially in the winter 2013/2014). Flushing is used to regular flooding of the town centre at peak tides.

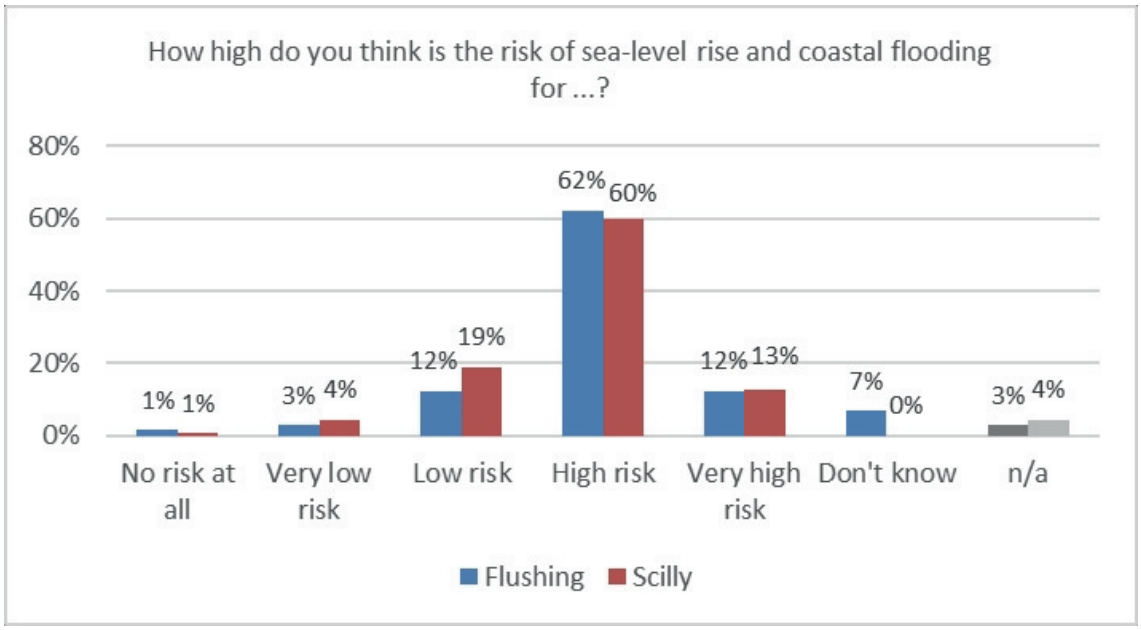

Figure 9: Awareness of risk of sea-level rise and coastal flooding in Flushing and the Isles of Scilly.

While the quantitative survey data cannot answer the question of whether the long-term inhabitants on the islands or in Flushing are more aware of risks or less alarmed (both surveys were undertaken in winter, when few second-home owners or tourists are present), the qualitative approach of semi-structured and non-structured interviews with locals supports the hypothesis that native islanders as well as people who have lived in Flushing for a long time are less alarmed by extreme weather conditions and uncertain projections of future developments. This, however, does not imply that they are less proactive.

Coastal protection is an important issue in both communities. In Flushing, a major floodgate protects the main road and properties from flooding. However, during spring tides the installed valves push the sea water back to the road, and this protection does not always work as

intended. Protection against flooding is, therefore, mainly an individual responsibility. Most homes in the flood-prone area of the village use sandbags or have flexible flood boards, which are put out in advance of flood events, or left in place most of the time in the case of holiday homes, which are left uninhabited for long periods.

In the Isles of Scilly, different kinds of coastal protection are necessary. Hugh Town is protected by sea walls. Some of the off-islands have dykes (Figure 10). Apart from that, the islands are relatively exposed to the forces of waves and storm events. In extreme cases, sandbags are distributed by the council, and people fill them individually or collectively with sand from a local beach and use them as a complement to flood boards. The Environment Agency is responsible for the hard infrastructure in both cases. In the long run, both communities will have to find other solutions to protect their respective settlements, as higher peak tides and extreme events intensify the problems which are already being experienced, and hard infrastructure, such as seawalls, cannot solve the problem. In the Isles of Scilly coastal erosion threatens not only settlements but also agricultural areas and archaeological monuments.

Figure 10: Stabilisation of dyke on St Agnes (left); flood boards in front of holiday flats in Flushing (right).

The household survey shows that in both communities, the majority of respondents believe the local authorities should be more active in protecting their communities from the effects of sea-level rise and coastal flooding. In the Isles of Scilly, this majority (76%) is even higher than in Flushing (62%). Almost a third of the respondents in Flushing do not want the local authorities to be more active. This is a rather high number, given the regular flood events and the low-lying village centre. Accordingly, in Flushing, fewer people (58%) would support extra spending by the local council for flood and coastal protection than in the Isles of Scilly (85%).

Another question in the household survey addressed people's expectations in relation to national government. In both communities, two-thirds of the respondents expect more support, while almost one-third do not; figures which show that quite a high proportion of residents have accepted the rather isolated setting of their respective community, where funds directly from the national government or associated agencies are rarely allocated to the local administrations for infrastructure or coastal protection schemes.

Community-based adaptation

The question then is, what is the role of the community regarding adaptation to the described pressures, which will probably increase with further sea-level rise? Asked about participation in coastal protection, in Flushing, the majority (73%) answered that they were not participating. In the Isles of Scilly, however, almost half (46%) of the respondents stated that they were taking part in coastal protection efforts. Generally, this involves activities such as beach cleaning and placing sandbags. The results are even more revealing when looking at the different islands of the Isles of Scilly (see Figure 11). Participation is particularly high on the off-islands, and here, maintaining and repairing sea defences was also referred to. On the main island, St Mary's, and on the off-island Tresco—which is managed by a private tourism resort—participation is relatively low. Nevertheless, the lowest participation is in Flushing. In view of the fact that Hugh Town on St Mary's is the most vulnerable place, these results suggest that it is not necessarily the exposure to coastal hazards which makes the difference in perception, but rather smallness, degree of isolation, and necessity for self-help.

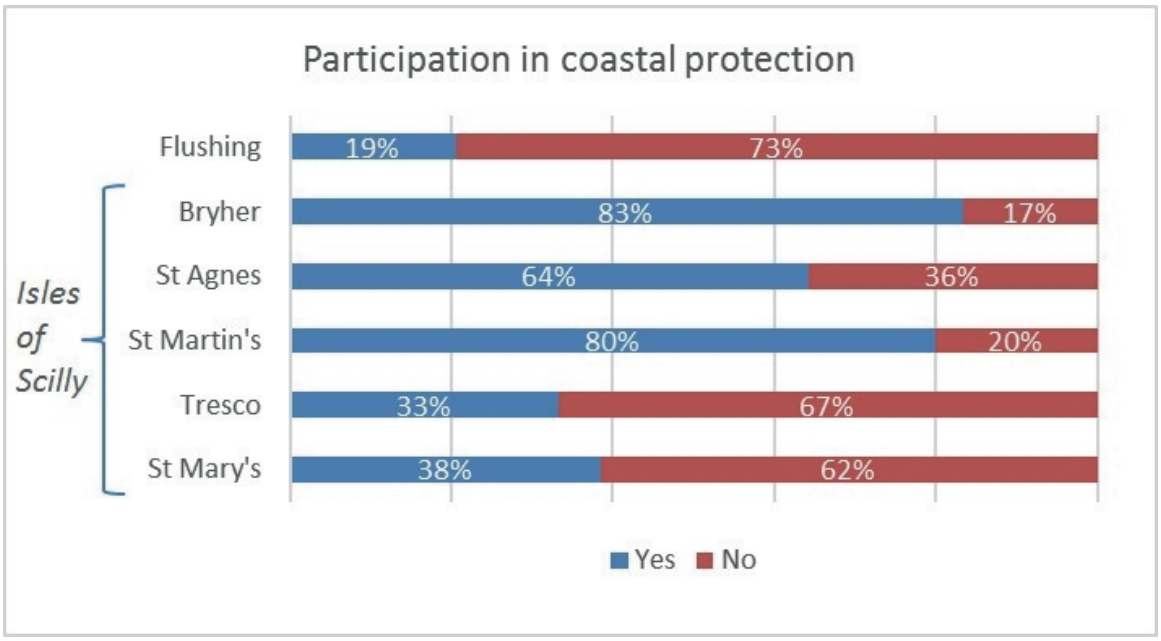

Figure 11: Participation in coastal protection in Flushing and the Isles of Scilly.

It seems as if, on the one hand, Flushing accepts its peripheral role and individual responsibility, while on the other hand, this also leads to a sort of passivity from a communitarian perspective. In the Isles of Scilly, people are aware of their isolation, but still, they have more need of external assistance due to higher exposure to extreme weather events. At the same time, especially on the off-islands, the higher degree of isolation produces an increased necessity for self-reliance and cooperation within the community. Here, the indicators described as social capital—trust, social networks, collective action—become relevant. However, the relevance of social capital differs in Flushing and in the Isles of Scilly. In both communities, helpfulness and trust are important elements. In cases of flooding, people assist each other in placing sandbags and exchange information about upcoming events. Since there is a high degree of fluctuation in the presence of people in the communities, helping neighbours who are not present is important—taking care of their homes on their behalf in times of flooding, for example. Also, collective action, which requires leadership or the availability of physical resources, can be highly relevant in relatively isolated places such as the two case studies. Especially in the Isles of Scilly, where sea defences have to be monitored and maintained, collective action is crucial in times of emergency. There can be a considerable delay before support services arrive on the islands.

In addition to resources, such as machines and tools, skills and local knowledge are important factors, which promote social capital's role in strengthening community resilience. This includes, for example, the understanding of local tidal rhythms and how to react to spring tides. In Flushing, locals are always informed about the tidal calendar and are, therefore, prepared for high water. They remove their cars and put out flood boards and sandbags. Similarly, in the Isles of Scilly, many people are prepared to manage for several days without the availability of fresh food in times of rough weather. Also, traditional land management skills, such as hedge cutting (Figure 12) and the stabilisation of dunes, contribute to erosion control in the less built-up areas of the islands.

Figure 12: Agricultural fields protected by hedges on Bryher, Isles of Scilly. (© Jan Petzold)

In relation to the historical dimension, both communities have undergone radical changes in their socio-economic structures in the past century, which have moved towards the tourism industry. This change implied a loss of ecotonal life. Technical skills are increasingly lost, with the dominance of the tourism sector and the decrease of the relevance of farming in the Isles of Scilly. However, the boating services between the islands, and similarly between Flushing and Falmouth continue to run as a service not only for locals but also for tourists. The boatmen are among the most informed people concerning weather conditions and changes to the marine environment. While the tourism sector still links communities to their respective terrestrial and marine environment, local life has lost its ecotonal character. The tourism industry relies on the natural environment; however, an understanding of its dynamics and the interactions between the marine and the terrestrial are not necessarily the foundation for its functioning.

5. Discussion

The comparison of the results from the two case studies regarding social adaptability to climate change can be discussed in a wider context, picking up the concept of ecotones, coastal zones in times of global change, a perspective of complexity theory, and the study of islands.

Is it possible to identify the specific character of life in coastal communities that could be termed 'ecotonal' (cf. Gillis, 2014)? Maritime identity is an important factor that is related to social capital and is unique to coastal areas (probably most strongly associated with small islands but also with small coastal regions in general). Both communities show features of 'maritime people' (Rainbird, 2007) —as also described in Hayward's aquapelago concept—by their high identification with their coastal environment and important social activities such as sporting (gig rowing), which are still popular. While in Flushing the marine environment has not always been

the most important contemporary factor for livelihoods, it is probably the most important factor for place attachment. In the Isles of Scilly, the ratio of 'native' islanders and the time people have lived in the community is relatively higher, which might contribute to the understanding of and interaction with the local environment. Resilience also means knowing how to live under certain circumstances, e.g., with permanent risk of flooding or isolation due to extreme weather conditions. Activities such as gig rowing or boating services are not only important for social capital, but also contribute to people's shared knowledge of the coastal and marine environment. The experience and knowledge of the local coastal dynamics enable people to adapt to environmental changes individually and collectively, particularly by increasing self-reliance in more remote and isolated places, such as the Isles of Scilly.

How can ecotones be understood in times of global change? Where are ecotones? It seems harder to identify ecotones from a social sciences point of view. In fact, coasts are no longer places effectively 'used' by people, at least regarding their terrestrial as well as their marine resources (Steinberg, 2001). Similarly, instead of living with the dynamics of the coastal ecological systems, coastal protection is understood as 'controlling nature' (Gillis, 2012). Many coasts—not only, but particularly, in the so-called Global North—are shaped by built-up land, and people rely on livelihoods other than those directly relating to their local coastal environment, as is shown in the two case studies. While Flushing relies on the local environment only indirectly—through its attractiveness for tourists—the Isles of Scilly still engage in agriculture, fishing, and flower farming, in addition to their focus on tourism, which, again, is based on the 'beauty' of the place, referring to the combined terrestrial and marine system. In contrast to the past, where communities and individuals were responsible for land stewardship, today institutionalised natural protection schemes and frameworks are in place. Thus, social change and economic developments have transformed formerly place-based coastal communities (in this case, especially the Isles of Scilly) and led to a decrease in reliance on natural resources or knowledge of the natural coastal environment; but the latter is still the foundation of the development and everyday life of the two case study communities.

The natural environment and its complexity and dynamics are still shaping people's feeling of a common identity and social memory, which results in a high awareness of risks and, to a certain degree, also a high coping capacity. In a social-ecological system, the social system needs to be understood as open, dynamic, and non-linear (Sawyer, 2005). As mentioned above, the demographic change of the two case studies also affected their interaction with the coastal environment. The growing tourism development and second-home ownership resulted in a loss of traditional local knowledge and land management practices. However, it also introduced new resources and ideas through linking social capital, which might be important for a community's resilience in a changing world, where no place is completely independent. For example, financial resources brought in by incomers to the coastal communities can become relevant for investments into climate change mitigation projects. An increase in linking social capital can be crucial in case it comes to forced relocation due to the impacts of sea-level rise, e.g., in low-lying deltas and Small Island Developing States (SIDS).

Since islands are often used as showcases for vulnerability to global (climate) change (Barnett & Waters, 2016; Kelman & West, 2009), this paper could also contribute to the question of whether there is any significant difference between the results of the island and mainland case studies. Both of the case studies feature issues of scale (smallness) and issues of isolation (geographic periphery), which affect their adaptability (cf. Kerr, 2005). The Isles of Scilly seem, on the one hand, more isolated geographically and, on the other, more self-reliant. The small local council has little capacity for large-scale adaptation measures, which is why in this respect the community relies on external funding and organisations. However, in times of emergency and for small-scale informal action, the island community seems much more adaptable than Flushing. In Flushing, exposure to extreme events is also lower, and the community is relatively better connected to centres and potential assistance in times of emergency. Certainly, in the Isles

of Scilly, the strong feeling of a common identity as islanders not only refers to native islanders but also to new inhabitants. Thus, there might be a higher potential to maintain or revive traditional ways of living with the sea on such islands.

It is important to bear in mind that "islands and mainlands are not easily separated; in fact, they are interdependent parts of a larger world that includes coasts and hinterlands as well as all that lies between" (Gillis, 2007, p. 277). However, the specific island spatiality—or 'islandness'—makes it easier to conceptualise islands as ecotones that also shape society, while continental coastal places are always embedded in a wider hinterland with the ecotone effect as rather marginal. Moreover, islands are social constructions and easier to conceptualise as well as to perceive as places (cf. Gillis, 2007). The unique sense of place they represent—not only for islanders but also for visitors and mainlanders—might even promote more involvement with the local coastal environment and its changes. In addition, the perceived boundedness of island spatiality makes them seemingly more manageable (Grydehøj & Kelman, 2017, p. 109).

6. Conclusion

What can a social science perspective add to the concept of ecotones, and vice versa? Sustainable management of coasts and islands can be promoted by understanding their social-ecological dynamics. Such an understanding refers, on the one hand, to the geomorphological dynamics of the intertidal and coastal zone, and on the other hand to changing anthropogenic perceptions, use of, and interference with the coast, as well as the potential of community action in vulnerable areas. This and many other studies (e.g., Baldacchino, 2005; Groome Wynne, 2007; Kilpatrick & Falk, 2003; Petzold, 2016; Petzold & Ratter, 2015) showed that social capital can be an important resource for various purposes on small islands, including adaptation to climate change.

The relevance of social capital for collective action regarding coastal protection and direct adaptation to sea-level rise, however, largely depends on local cultural, geographical, and historical contexts. Many coastal places, which in the past were shaped by their ecotonal character, today seem to be increasingly shaped by the influences of anthropogenic terrestrial-based developments (Gillis, 2012). The case studies show that despite much local knowledge being lost, day-to-day life in a tidal environment shapes people's place sensitivity and potentially their resilience towards sea-level rise. Therefore, research and adaptation planning should not merely focus on features of traditional local knowledge and traditions of collective action but also analyse everyday practices and mental constructions, values, and perceptions of coasts in 'modern' societies.

The study of ecotones, moreover, can be a step to advance the discussion regarding an alleged dichotomy between islands and continents (cf. Stratford et al., 2011). However, research on ecotones from a social sciences perspective requires stronger empirical foundations. Island studies' goal of understanding islands "on their own terms" (McCall, 1994), as well as related approaches focusing on the archipelago (Baldacchino, 2006; Pugh, 2013; Stratford et al., 2011), the aquapelago (Hayward, 2012), and island-sea-ship relationships (Pugh, 2016) allows it to provide a valuable foundation for analysing people-place relationships in a dynamic coastal environment, without generalising features of vulnerability (Barnett & Waters, 2016; Kelman, 2010; Moore, 2010). While islandness and island spatiality are specific issues to be studied, taking the dichotomy between islands and mainlands as a given bears epistemological risks. Thus, the social construction of islands and the role of hinterlands need to be considered when discussing ecotones, in particular in comparison to continental case studies, to avoid mistaking "our continental projections for island realities" (Gillis, 2007, p. 286).

Climate change is an example of environmental change implying a great deal of uncertainty. Therefore, a perspective on resilience that accounts for local social and environmental dynamics and coping capacities is necessary (cf. Ratter, 2013). The concepts of ecotones and the aquapelago help to point out that marine ecosystems play a fundamental role,

not necessarily only in relation to livelihoods, but also in relation to feelings of identity and belonging, which influence people's attitudes and actions in terms of environmental pressures and coastal protection. Understood as a historical approach, Gillis's ecotone perspective offers the opportunity to include the specific contradictions and developments of coasts in modernity; how coastal places are perceived, constructed, and deconstructed (cf. Ratter et al., 2016; Steinberg, 2001). Directed towards the future, the approach of seeing islands and coastal zones as ecotones can thus contribute to finding sustainable adaptation options and avoiding top-down adaptation strategies, which potentially lead to disadvantages for the local communities.

References

Adger, W.N. (2003). Social capital, collective action, and adaptation to climate change. *Economic Geography*, 79(4), 387-404. https://doi.org/10.1111/j.1944-8287.2003.tb00220.x

Arrow, K.J. (2000). Observations on social capital. In P. Dasgupta & I. Serageldin (Eds.) *Observations on social capital* (pp. 3-5). Washington, DC: World Bank.

Baldacchino, G. (2006). Islands, island studies, Island Studies Journal. *Island Studies Journal*, 1(1), 3-18.

Baldacchino, G. (2005). The contribution of 'social capital' to economic growth: lessons from island jurisdictions. *The Round Table*, 94(378), 31-46. https://doi.org/10.1080/00358530500033075

Barnett, J. & Waters, E. (2016). Rethinking the vulnerability of small island states: climate change and development in the Pacific Islands. In J. Grugel & D. Hammett (Eds.) *Rethinking the Vulnerability of Small Island States: Climate Change and Development in the Pacific Islands* (pp. 731-748). London: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-42724-3_40

Berkes, F. & Ross, H. (2013). community resilience: toward an integrated approach. *Society & Natural Resources*, 26(1), 5-20. https://doi.org/10.1080/08941920.2012.736605

Gillis, J.R. (2014). Not continents in miniature: islands as ecotones. *Island Studies Journal*, 9(1), 155-166.

Gillis, J.R. (2012). *The Human Shore: Seacoasts in History*. Chicago: University of Chicago Press. https://doi.org/10.7208/chicago/9780226922256.001.0001

Gillis, J.R. (2007). Island sojourns. *Geographical Review*, 97(2), 274-287. https://doi.org/10.1111/j.1931-0846.2007.tb00403.x

Groome Wynne, B. (2007). Social capital and social economy in sub-national island jurisdictions. *Island Studies Journal*, 2(1), 115-132.

Grydehøj, A. & Kelman, I. (2017). The eco-island trap: climate change mitigation and conspicuous sustainability. *Area*, 49(1), 106-113. https://doi.org/10.1111/area.12300

Harrison, S. & Stainforth, D. (2009). Predicting climate change: lessons from reductionism, emergence, and the past. *Eos, Transactions American Geophysical Union*, 90(13), 111-112. https://doi.org/10.1029/2009EO130004

Hau'ofa, E. (1993). Our sea of islands. In E. Waddell, V. Naidu, and E. Hau'ofa (Eds.) *A New Oceania: Rediscovering Our Sea of Islands* (pp. 2-16). Suva: University of the South Pacific.

Hayward, P. (2012). Aquapelagos and aquapelagic assemblages. *Shima*, 6(1), 1-11.

IPCC (2013). Summary for policymakers. In T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, A., Y. Xia, V. Bex, & P.M. Midgle (Eds.) *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 3-29). Cambridge, UK & New York: Cambridge University Press.

Isles of Scilly AONB (2010). The Isles of Scilly AONB management plan 2010-2014. Retrieved from http://www.ios-aonb.info/wp-content/uploads/2012/09/IoS-AONB-STRATEGIC-PLAN-2010-2014-LR.pdf

Kelman, I. (2010). Hearing local voices from Small Island Developing States for climate change. *Local Environment*, 15(7), 605-619. https://doi.org/10.1080/13549839.2010.498812

Kelman, I. & West, J.J. (2009). climate change and small island developing states: a critical review. *Ecological and Environmental Anthropology*, 5(1), 1-16.

Kerr, S.A. (2005). What is small island sustainable development about? *Ocean & Coastal Management*, 48(7-8), 503-524. https://doi.org/10.1016/j.ocecoaman.2005.03.010

Kilpatrick, S. & Falk, I. (2003). Learning in agriculture: building social capital in island communities. *Local Environment*, 8(5), 501-512. https://doi.org/10.1080/1354983032000143662

Krishna, A. & Shrader, E. (1999). Social capital assessment tool. Prepared for the Conference on Social Capital and Poverty Reduction. The World Bank. Washington. Retrieved from http://siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Assessment-Tool--SOCAT-/sciwp22.pdf

Lyth, A., Harwood, A., Hobday, A.J., & McDonald, J. (2015). Place influences in framing and understanding climate change adaptation challenges. *Local Environment*, 21(6), 730-751. https://doi.org/10.1080/13549839.2015.1015974

Magis, K. (2010). Community resilience: an indicator of social sustainability. *Society & Natural Resources*, 23(5), 401-416. https://doi.org/10.1080/08941920903305674

McCall, G. (1994). Nissology: a proposal for consideration. *Journal of the Pacific Society*, 17(2-3), 1-14.

Mercer, J., Kelman, I., Alfthan, B., & Kurvits, T. (2012). Ecosystem-based adaptation to climate change in caribbean small island developing states: integrating local and external knowledge. *Sustainability*, 4(12), 1908-1932. https://doi.org/10.3390/su4081908

Milfont, T.L., Evans, L., Sibley, C.G., Ries, J., & Cunningham, A. (2014). Proximity to coast is linked to climate change belief. *PLoS ONE*, 9(7), e103180. https://doi.org/10.1371/journal.pone.0103180

Mitchell, M. (2016). The lost lands of Lyonesse: telling stories of Cornwall and the Isles of Scilly. *Shima*, 10(2), 94-111.

Moore, A. (2010). Climate changing small islands: considering social science and the production of island vulnerability and opportunity. *Environment and Society: Advances in Research*, 1(1), 116-131. https://doi.org/10.3167/ares.2010.010106

Mortimer, T.A.L., Scourse, J.D., Ward, S.L., & Uehara, K. (2013). Simulated late-glacial and Holocene relative sea-level and palaeotidal changes on the Isles of Scilly: a new approach for assessing changes in the areal extent of the inter-tidal zone. *Geoscience in South-West England*, 13, 152-158.

Natural England (2015). Fal and Helford Special Area of Conservation: Site Information (draft). Retrieved from https://www.gov.uk/government/publications/marine-conservation-advice-for-special-area-of-conservation-fal-and-helford-uk0013112/fal-and-helford-sac-site-information-draft

Nurse, L., McLean, R.F., Agard, J., Briguglio, L., Duvat, V., Pelesikoti, N., Tompkins, E.L., & Webb, A. (2014). Small islands. In V.R. Barros, C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L. White (Eds.) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1-60). Cambridge, UK & New York: Cambridge University Press.

Office for National Statistics (2011). 2011 Census: usual resident population, local authorities in the United Kingdom. Table KS101UK. Retrieved from http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-the-united-kingdom/rft-table-2-census-2011.xls

Pelling, M. (2011). *Climate Change and Social Capital*. Foresight Project. London: Government Office for Science. Retrieved from http://www.bis.gov.uk/assets/foresight/docs/international-dimensions/11-1029-climate-change-and-social-capital.pdf

Petzold, J. (2017). *Social Capital, Resilience and Adaptation on Small Islands: Climate Change on the Isles of Scilly*. Cham: Springer. https://doi.org/10.1007/978-3-319-52225-8

Petzold, J. (2016). Limitations and opportunities of social capital for adaptation to climate change: a case study on the Isles of Scilly. *The Geographical Journal*, 182(2), 123-134. https://doi.org/10.1111/geoj.12154

Petzold, J. & Ratter, B.M.W. (2015). Climate change adaptation under a social capital approach – an analytical framework for small islands. *Ocean & Coastal Management*, 112, 36-43. https://doi.org/10.1016/j.ocecoaman.2015.05.003

Pugh, J. (2016). The relational turn in island geographies: Bringing together island, sea and ship relations and the case of the Landship. *Social & Cultural Geography*, 17(8), 1-20. https://doi.org/10.1080/14649365.2016.1147064

Pugh, J. (2013). Island movements: thinking with the archipelago. *Island Studies Journal*, 8(1), 9-24.

Putnam, R.D., Leonardi, R., & Nanetti, R. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.

Rainbird, P. (2007). *The Archaeology of Islands*. *Cambridge*, New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511619007

Ratter, B.M.W. (2013). Surprise and uncertainty: framing regional geohazards in the theory of complexity. *Humanities*, 2(1), 1-19. https://doi.org/10.3390/h2010001

Ratter, B.M.W., Petzold, J., & Sinane, K. (2016). Considering the locals: coastal construction and destruction in times of climate change on Anjouan, Comoros. *Natural Resources Forum*, 40(3), 112-126. https://doi.org/10.1111/1477-8947.12102

Ratter, B.M.W. & Possekel, A.K. (2000). 'Island Systems Management' als Planungsstrategie für das Ressourcen- und Hazardmanagement kleiner Inseln. In H.H. Blotevogel, J. Oßenbrügge, & G. Wood (Eds.) *Lokal verankert - weltweit vernetzt. Tagungsbericht und wissenschaftliche Abhandlungen* (pp. 187-193). Stuttgart: Steiner.

Rubinoff, P.B. & Courtney, C.A. (2008). How resilient is your coastal community? a guide for evaluating coastal community resilience to tsunamis and other hazards. *Basins and Coasts*, 2(1), 24-28.

Sawyer, R.K. (2005). *Social Emergence: Societies as Complex Systems*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511734892

Steinberg, P.E. (2001). *The social construction of the ocean*. Cambridge, UK: Cambridge University Press.

Stratford, E., Baldacchino, G., McMahon, E., Farbotko, C., & Harwood, A. (2011). Envisioning the archipelago. *Island Studies Journal*, 6(2), 113-130.

University of Portsmouth (n.d.). *History of Flushing, in Carrick and Cornwall: Map and description. A Vision of Britain through Time*. Retrieved from http://www.visionofbritain.org.uk/place/21417

Walker, B.H. & Salt, D. (2006). *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Washington, DC: Island Press.

Weichselgartner, J. & Kelman, I. (2015). Geographies of resilience: challenges and opportunities of a descriptive concept. *Progress in Human Geography*, 39(3), 249-267. https://doi.org/10.1177/0309132513518834

Wilson, G.A. (2015). Community resilience and social memory. *Environmental Values*, 24(2), 227-257. https://doi.org/10.3197/096327114X13947900182157

Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Isuma: Canadian Journal of Policy Research*, 2(1), 11-17.

Island Studies Journal, 13(1), pp. 119-134

Subnational climate justice for the French Outre-mer: postcolonial politics and geography of an epistemic shift

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ABSTRACT: This paper presents France's relation to climate change from the perspectives of the French overseas territories: the Outre-mer. Scattered across the Atlantic Ocean, the Indian Ocean, and the Pacific Ocean, these formerly colonized territories are subnational jurisdictions of France. Through examining their greenhouse gas emissions, their ecological importance, their economic conditions, as well as their policies, I argue that understanding the Outre-mer climate change perspectives demands an epistemic shift characterized by two theoretical gestures. Firstly, the Outre-mer perspectives require moving beyond the single geographical imaginary of France that only represents its European mainland. Contributing very little to France's greenhouse gas emissions, these territories are particularly exposed and particularly vulnerable to the effects of climate change, making the case for a subnational climate justice. Secondly, beyond their portrayal as foreign and voiceless victims, the Outre-mer perspectives also recognize the presence of postcolonial subjects as political and historical actors facing climate change, calling forcefully for postcolonial equality and social justice.

Keywords: climate change, climate justice, France, Outre-mer, postcolonial politics, subnational island jurisdictions (SNIJs)

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Introduction

In December 2015, Paris hosted the United Nations Conference on Climate Change (COP21) where a historic deal to cut greenhouse gas emissions was reached. A goal to limit the rise in temperature to under 2° C by 2100 was set. So far, 175 countries have ratified the Paris Agreement. Although Paris was at the centre of this conference and the French government was proud to play a key role in reaching this accord, some of the places in France that are most exposed to the effects of climate change are located far from Paris. Rising sea levels, intensification of extreme climate events and loss of biodiversity pose serious threats to the small French islands in the Caribbean Sea, the Indian Ocean and the Pacific Ocean. Sitting at the geographical and political margins of the nation, these islands are central to France's experiences of climate change. This paper offers a philosophical inquiry into France's relation to climate change neither from the centre of its capital city, nor from its hexagonally shaped European mainland, but from the perspectives of the French overseas territories: the Outre-mer.

This focus attempts to bridge two divides persistent in the academic scholarship. On the one hand, a significant part of the academic literature on subnational island jurisdictions has focused on questions of sovereignty, identity politics and governance, while paying little to no attention to ecological issues (Aldrich & Connell, 1998; Baldacchino, 2010; Bonilla, 2015; Rezvani, 2014; Grydehøj, 2016). This is evident in the case of the French Outre-mer (Daniel & Constant, 1997; 'L'État Outre-mer', 2016; Lemercier et al., 2014). This absence is particularly striking considering the vast academic expertise on ecological issues in these

territories by ecologists, biologists and geographers (see Saffache, 2003). This results in both the production of an understanding of changes in sovereignty and political status on these islands that is oblivious to ecological issues; and a body of knowledge of these territories' ecosystems that seldom engages with their nonsovereign status. On the other hand, in investigating relations of power between main polluting states and Small Island Developing States (SIDS), the academic literature on climate justice has mostly overlooked the specific political, legal and ecological situations of these former colonies facing global warming (Zellentin, 2015; Kelman & West, 2009; Barnett & Campbell, 2010; Betzold, 2015). Moreover, by concentrating on regional, provincial and metropolitan areas of great size and relevance regarding greenhouse gas emissions such as Acre in Brazil or California in the United States of America, the rare literature that engages with subnational jurisdictions and climate change neglects the cases of these formerly colonized and nonsovereign territories (see Schreurs, 2008; Neto, 2015; Anderton & Setzer, 2017). This paper is a first step in bridging these divides, by taking a closer look at the French overseas territories.

Through examining their greenhouse gas emissions, their economic realities and different national and international policies, I argue that understanding climate change perspectives from the Outre-mer demands an epistemic shift characterized by two distinct yet related theoretical gestures. Firstly, the Outre-mer perspectives require moving beyond the single geographical imaginary of France. The first part of this paper suggests that the experiences of the Outre-mer call into question the dominant geographical narrative of the French nation that only represents its European location. Following this shift, the second part of the paper considers climate justice at the subnational level, tracing the uneven contributions to global warming, the unequal exposure and the differentiated vulnerabilities between mainland France and the Outre-mer. The third part highlights the way in which the political 'in-between' of the Outre-mer and their relations with mainland France impact their access to international funds for climate change mitigation. Secondly, the Outre-mer climate change perspectives also hint at an epistemic shift that recognizes the presence of postcolonial subjects as both political and historical actors. As such, the fourth part of this paper challenges the portrayal of the inhabitants of the Outre-mer as mere victims of climate change, recognizing the historical inhabitants' engagement with environmental issues as well as their political efforts towards a postcolonial equality within the French Republic.

Signing in the name of three oceans? Moving beyond the single geographical imaginary of France

On any given night, after the news on the national television channels in France, comes the weather forecast. Day in, day out, when millions of French citizens turn on their TV sets or computers to hear the news and learn about the forthcoming weather, they are presented with a geographical image of the national territory of the French Republic. That image is comprised of the European mainland and Corsica. It has come to represent the imaginary geography one commonly associates with the French territory. The choice made by most national TV channels not to incorporate the Outre-mer in the geographical representation of the nation is but a token of the insidious exclusion that French citizens related to the Outre-mer and postcolonial immigration face (Ndiaye, 2009; Fassin, 2009, Blanchard et al., 2006; Vermeren & Ferdinand, 2018). The Outre-mer and its inhabitants are absent from the geographical narrative of the nation, that is the scenery and the geographical projection on a map of the idea of the nation. That particular image and location of France, the one that is immediately associated with the name 'France', carries this evident absence of the Outre-mer.

Notwithstanding the symbolic exclusion conveyed, this geographical narrative is particularly misleading when one attempts to grasp the country's relationship with climate change. Understanding the climate change perspectives of the Outre-mer requires an

epistemic shift of the geographical imaginary of France, one that posits France as a multi-located political entity that cannot be reduced to one of its locations, and particularly its European one. Such a move is necessary not only because the Outre-mer are constitutionally integral parts of the French national territory, but also because they hold a central significance with regards to the French experiences of climate change.

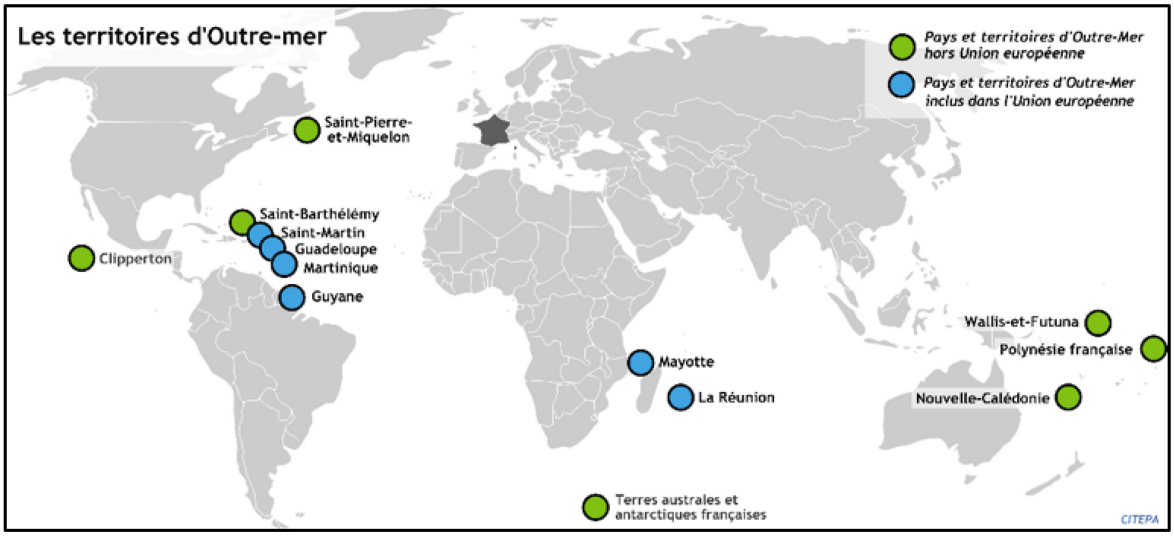

Figure 1: The overseas territories of France. *Source:* CITEPA, 2016.

In addition to its European land, the Republic of France is comprised of overseas territories located in the Atlantic Ocean, the Indian Ocean and the Pacific Ocean, which harbour 2.7 million French citizens. These territories possess various ecological, geographical and social characteristics, but also possess various constitutional arrangements with the state. These remains of the French colonial empire are mainly composed of small and densely populated islands located in tropical areas that rarely exceed 1,000 km^2, with the exception of the larger New Caledonia archipelago (18,575 km^2). In the Atlantic Ocean region, one can find the islands of Martinique, Guadeloupe, Saint-Martin (shared with the Netherlands) and Saint-Barthélemy in the Caribbean, while Saint-Pierre-and-Miquelon lies right off the coast of Newfoundland, Canada. La Réunion and Mayotte rest in the Indian Ocean. French Polynesia, New Caledonia and Wallis-and-Futuna are the French archipelagos in the Pacific Ocean. These archipelagos in the Pacific are more scattered. For instance, French Polynesia consists of 118 small islands, some of which are low-lying atolls. These volcanic islands are mostly made of hilly landscapes at their centre and low-lying plains on the coasts. As illustrated by the map, these islands are characterized by their remoteness from mainland France. The Caribbean islands of Martinique and Guadeloupe are 7000 km away from mainland France while French Polynesia and New Caledonia in the Pacific Ocean are respectively more than 15,000 km and 16,000 km away. Aside from these islands, French Guiana, with over 86,000 km^2 is located on the northern flank of the South American continent.

France is also comprised of mostly uninhabited territories used for scientific and military purposes called 'Terres Australes et Antarctiques Françaises' (French Southern and Antarctic Lands), referred to as TAAF, some of which possess permanent scientific and military stations. TAAF is made up of four archipelagos: the archipelago of Crozet, the archipelago of Kerguelen, the Eparse islands, and the islands of Saint-Paul and Amsterdam in the Indian Ocean. TAAF also includes a massive strip of land in the Antarctic called Terre-Adélie, with an estimated surface area of 432,000 km^2. Likewise, France possesses the very isolated, uninhabited Clipperton Island in the Pacific Ocean. Including Terre-Adélie, the French overseas territories have the same surface area as that of mainland France (about 550,000 km^2).

Without the huge strip of land of Terre-Adélie, the French overseas territories account for 18% of the overall national land territory.

These territories possess various constitutional arrangements within the French Republic. On the one hand, some of these territories are overseas departments and regions of France, referred to as DROM (Départements et Régions d'Outre-mer). The DROM are composed of the four old colonies (Martinique, Guadeloupe, La Réunion, and French Guiana) and Mayotte, and follow the principle of legislative identity expressed in the Article 73 of the French Constitution. That means that these territories are part of France, and every national and European law applies there, unless otherwise specified. On the other hand, some overseas territories are collectivities of the Outre-mer referred to as COM (Collectivités d'Outre-mer). The COM territories are also part of France and include Wallis-and-Futuna, Saint-Pierre-and-Miquelon, Saint-Martin, Saint-Barthelemy and French Polynesia. They follow the special legislative regime stipulated in Article 74 of the Constitution, where French and European law do not apply automatically without adaptation, unless otherwise specified (Faberon & Ziller, 2007). Following violent upheavals between activists in favour of independence and state police in the late 1980s, New Caledonia has a unique status within France, which allows for greater legislative autonomy and lays out the path for possible independence. A referendum will take place in 2018.

Consequently, these Outre-mer force us to consider France not as a single continuous territorial entity, but as a pluri-located Republic spanning across three oceans. France's engagement and exposure to climate change cannot be reduced to the causes and impacts of the European mainland, but must account for these islands. Indeed, on 22 April 2016, in New York, when former president François Holland ratified the COP 21 accord, his signature carried the experiences of French citizens located in Europe, in the Atlantic, in South America, in the Indian Ocean and the Pacific Ocean.

Climate justice in the Outre-mer: low greenhouse gas emissions, high vulnerabilities

As the latest report of the Intergovernmental Panel on Climate Change highlighted, human activities lead to an accelerated warming of the planet (Field et al., 2014, p. 3). Nonetheless, not all countries and inhabitants contribute equally to global warming, nor are all inhabitants affected in the same way (Roberts & Bradley, 2006; Roberts et. al, 2015). Despite their relatively low contribution to global warming, small developing countries, poor people, indigenous people, the disenfranchised and women in poor nations are the first impacted by climate change. Conceiving of France as a pluri-located geographical entity enables us to observe the disparities and differences in relation to climate change between the Outre-mer France and the European France. The Outre-mer case sheds light on the rarely addressed climate justice perspectives of nonsovereign territories.

Indeed, most climate justice movements and academic literature have emphasized the inequalities of contribution to global warming and the geographical and socio-political disparities of its consequences, at both the international and the domestic level (Gardiner, 2011; Shue, 2014). Understandably, calls for distributive justice such as the Bali Principle of Climate Justice have been framed from the standpoint of developing sovereign states (Schlosberg, 2007, pp. 79-99). For instance, academic publications on climate justice in the Caribbean have mostly focused on sovereign small island nations, despite the fact that half of the islands in the region are dependent territories (Baptiste & Rhiney, 2016). Even though nonsovereign islands represented 12% of the population of the Caribbean in 2017 and 5% of the total land area, they account for 29% of the Caribbean islands' marine area under jurisdiction (derived from Flanders Marine Institute, 2016; CIA, 2018).

These international and domestic approaches to climate justice are equally relevant to France. However, the case of the French overseas territories requires examining climate justice

from a slightly different angle. As part of the French national jurisdiction, the Outre-mer brings attention to a subnational level, emphasizing inequalities in the contribution to global warming and its consequences between the Outre-mer and mainland France (Barret, 2014).

The Outre-mer do contribute to global warming. However, amounting to less than 4% of the national population (2.7 million), their greenhouse gas emissions pale in comparison to those of mainland France. In 1990, the reference year for international greenhouse gas emission policies, the overseas territories emitted 12 million tons of Carbon Dioxide Equivalent (CDE), representing just 2.4% of total French emissions (all figures derived from CITEPA, 2016). That year, they emitted 6.2 tons CDE per inhabitant compared to the 9 tons CDE for inhabitants of mainland France. In 2014, while the overall greenhouse gas emissions of France decreased (from 521 to 415 million tons), the Outre-mer emissions rose to 23 million tons – 5.6% of total French emissions. This means that in 2014, the Outre-mer emitted more greenhouse gas per inhabitant (8.5 tons CDE) than mainland France (6.1 tons CDE). Nonetheless, it is important to note that greenhouse gas emissions result not only from patterns of consumption and modes of living – which vary greatly in the Outre-mer – but also from types of land use and modes of energy production. Amounting to 18% of the overall national land territory, the Outre-mer contributed a mere 5.6% of total greenhouse gas emissions in 2014.

The high greenhouse gas emissions per capita of the Outre-mer does indicate a concerning tendency with the Outre-mer use of fossil fuel such as coal and oil. All the Outre-mer use more than 80% of fossil fuel for primary energy: this ranges from 82% in Guiana (2012) to 99% in Mayotte (2011), while Martinique and Guadeloupe stood at 93% in 2012 (Bareigt & Fasquelle, 2014, p. 9). About two-thirds of the energy of the Outre-mer goes into fuel for transport (OREC, 2016, p. 5). Despite having good conditions to develop hydro, solar, geothermic, and wind power, renewable energy is only seen as supplementary to fossil fuel sources. With the exception of Guiana and La Réunion, which make use of hydropower for electricity production, renewable energy in the Outre-mer contributed to less than 10% of the energy used. However small, the development of renewable energy in the Outre-mer is still more advanced in the domain of electricity production than in mainland France (Bareigt & Fasquelle, 2014, p. 18). This is simply because mainland France still clings to nuclear power for 75% of its electricity production (Bareigt & Fasquelle, 2014, p. 21). In short, even though the contributions of the Outre-mer are small, and some initiatives in renewable energy have been implemented, they still have fairly poor climate-neutral policies and practices because of their extreme dependence on fossil fuel.

Contributing very little to global warming in comparison to the rest of France, the Outre-mer represent the places within France's national territory that are most vulnerable to its consequences. Three sets of factors expose the vulnerability of the French overseas territories. Firstly, these territories are vulnerable due to their geography. Most of them are small islands and archipelagos located in tropical latitudes and bear witness to a large rise in temperature. For instance, in Noumea (New Caledonia), from 1970 to 2009, there was an average increase of 1.3° C. In Martinique, from 1965 to 2009, the average temperature increased by 1.44° C, almost twice as high as the global mean temperature increase for the same period (ONERC, 2012, p. 28). Throughout this period, sea levels have risen in the French overseas territories by an average of 3 mm per year (ONERC, 2012, p. 32). It is estimated that sea level rise in these territories may reach anywhere from 40 cm to 1 m above current levels by the end of the century (ONERC, 2012, p. 34). Though these effects are not specific to the Outre-mer (mainland France also had a 1° C rise in mean temperature in the 20th century), their insularity and their relatively small size makes any loss of land more impactful on the socio-economic life of inhabitants (Meteo France, 2015). As the water rises on coastal low-lying plains, roads, shops, markets and buildings by the sea could be partly submerged. Likewise, the global rise in temperature may lead to hurricanes of greater intensity

in tropical areas, where most of the Outre-mer are situated (Walsh et al., 2015). The Atlantic hurricanes of Maria, Irma and José in the summer of 2017 point to the tangible threats of such an increase.

Secondly, the Outre-mer have a particular vulnerability because of their rich biodiversity. Indeed, these territories possess highly endemic and vulnerable ecosystems, and most of them are located in biodiversity hotspots. At the national level, these overseas territories harbour 80% of French national biodiversity (Gargominy & Boquet, 2003). This includes terrestrial flora and fauna such as the vast forest reserve of French Guiana and the coastal mangroves of Guadeloupe and Martinique. Guiana holds the largest forest bloc of the European Union and constitutes a major biodiversity reserve. While being six times smaller than mainland France, Guiana harbours three times the number of vertebrate species (ONERC, 2012, p. 49). The Outre-mer biodiversity is also found at sea, in the coral reefs of New Caledonia and Clipperton Island. To grasp the full, global scale of French marine biodiversity, we also need to look at the vast maritime domain of France. Since the United Nations Convention on the Law of the Sea in December 1982, countries that signed the convention have been able to claim an Exclusive Economic Zone (EEZ) that extends to 200 nautical miles from land. Over this area, the coastal state has:

> sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil (United Nations, 1982, Article 56).

France has an EEZ of 11 million km^2, the second largest in the world behind the United States. 97% of that zone is located in the overseas territories (MOM, 2016). The overseas marine biodiversity that falls under French sovereignty thus presents not only a major part of the national biodiversity, but more importantly a significant part of the world's biodiversity. 10% of the world's coral reefs and 20% of its atolls are in waters under French jurisdiction (IFRECOR, 2011). The rise of sea temperature and the subsequent acidification of the oceans constitute a threat to these delicate ecosystems.

Thirdly, these territories are vulnerable to climate change because of the poor state of their economies. The economy of the overseas territories of France is mainly based on tourism and the agricultural production of export products such as sugar, bananas and rum in Martinique, Guadeloupe and La Réunion. Some territories have important specific economies like the nickel mining in New Caledonia and the space center in Guiana – Kourou is the spaceport for the French space agency. Despite their differences, most of the Outre-mer have lower GDPs per capita than mainland France, ranging from 10% lower in New Caledonia, 30% lower in Martinique and Guadeloupe, to 50% lower in Guiana and 80% lower in Mayotte (Doligé & Vergoz, 2014, p. 28). Consequently, these territories display much higher levels of unemployment and poverty than mainland France. In 2016, most of the French overseas territories had unemployment rates two or three times higher than the 10% average of mainland France. For instance, the unemployment rates of Guiana, Martinique, Guadeloupe and La Réunion ranged between 18% to 24% (INSEE, 2017a). Moreover, these territories are the places in France that have the highest poverty rates. In a stark contrast to the 14.1% poverty rate of mainland France in 2014, the Outre-mer display rates hovering around 40% – as was the case for La Réunion in 2013 and Guyana in 2014 – and even 84% in the case of Mayotte in 2011 (INSEE, 2017b, p. 64; Brasset & Le Pablic, 2014, p. 1; Actif et al, 2013, p.1; Schneider, 2017). In 2015, 20% of the population of French Polynesia lived under the relative poverty threshold of 385 euros, and 17% of the New Caledonia population lived on less than 600 euros in 2008 (latest field survey) (IEOM, 2017, p. 36; Naudet, 2017, p. 36, p. 41). By threatening the very resources from which local fishermen make a living, as is the case for coral bleaching, global warming places additional stress on already fragile economies.

In short, their high exposure to global warming, their rich biodiversity and their concerning socio-economic conditions make these islands exceptionally vulnerable. With high rates of unemployment, insularity, and fragile economies, these territories possess very little leeway to prepare, adapt and confront climate change. The need for climate justice for the Outre-mer arises from this particular point. Despite their relatively low greenhouse gas emissions and marginal contribution to global warming, these territories are particularly exposed and particularly vulnerable to the effects of climate change.

Not the same, not different: facing climate change from the political 'in between' of the Outre-mer

In light of these stark inequalities between the Outre-mer and mainland France, what recourses do these islands have to confront climate change? How does France address climate change nationally and particularly in the Outre-mer? At the margins of the national territory, yet at the centre of the foreseen climate change consequences, what possibilities do these territories have to participate in international accords, to face the immediate consequences and to voice their particular experiences?

The landmark Paris Agreement follows previous commitments from France to confront climate change. With its participation in the previous COP conferences and its ratification of the Kyoto Protocol, France has clearly set out policies to tackle these issues at its national level. On 19 February 2001, France enacted a law that declared the fight against global warming "a national priority" and created a governmental agency dedicated to this issue: Observatoire National sur les Éffets du Réchauffement Climatique (ONERC). This agency gathers information on climate change and plays an advisory role for the government. This legislation established the two pillars of French national policy regarding climate change: greenhouse gas emissions reduction and climate change adaptation (Dupuis, 2009). A national 'climate plan' was then put in place in 2004, geared towards emissions reduction, and a national plan for climate change adaptation was devised for the period of 2011 to 2015. The latter suggests many actions following different themes such as health, energy, biodiversity and governance. The consequences and the specificities of the Outre-mer are acknowledged. The very fact that ONERC was founded and headed by the late Paul Vergès, a Senator from La Réunion, symbolizes this acknowledgment. However, although these plans recognize the heightened exposure and vulnerabilities of the Outre-mer, these territories are still not the subject of a specific action plan (MEDDTL, 2011, p. 19).

Due to their geographical circumstances, the Outre-mer have called for specific measures. On 27 October 2015, in the run-up to the COP 21 conference in Paris, three Outre-mer deputies, Serge Letchimy (Martinique), Ibrahim Aboubacar (Mayotte) and Maïna Sage (French Polynesia), submitted a report on the consequences of climate change in the overseas territories of France to the French Parliament. The three deputies called attention to the vulnerability of the overseas territories and the need to keep their situation in mind at the coming Paris COP. They highlighted the special situation of the Outre-mer compared to small sovereign territories of similar size and population, addressing their access to international funding to deal with climate change:

> Climate change has no frontiers! If the nation honourably takes actions in favour of the most vulnerable sovereign states, it seems inconceivable that the French overseas territories should not be supported in the same way, considering their great environmental and economic vulnerability and the exceptional services produced by their marine and terrestrial biodiversity. These territories, which have served the spatial and military interests of France, are major geostrategic assets that deserve the utmost attention of our country (Sage et al., 2015, p. 54; translation my own).

The deputies point specifically to the exclusion of the overseas territories from international funding mechanisms for Small Islands Developing States (SIDS) such as the Green Climate Fund (GCF). This fund was created by 194 parties at the 2010 United Nations Framework Convention on Climate Change (UNFCCC) as a means to finance projects in Least Developed Countries, SIDS and African states that respond to climate change. Today this fund is worth over 10 billion dollars. Unlike sovereign islands and developing states, the French overseas territories do not have access to it, as the deputies explain:

> In the current state of the law, the Green Fund is not accessible for the overseas territories, nor for other overseas territories of contributing parties. Consequently, this exclusion creates a certain inequality with respect to our territories, whose own resources are not much greater than those of sovereign states close to us in each region that are faced with the same difficulties and same current and future challenges (Sage et al., 2015, pp. 54-55; translation my own).

This exclusion from international finance mechanisms regarding climate change is not new. Here, the distinction within the French overseas territories between DROM and COM is relevant. When France signed the United Nation Framework Convention on Climate Change on 13 June 1992 and ratified it on the 25 March 1994, it included all the emissions of its overseas territories. In other words, when France informs other members about the state of progress regarding greenhouse gas reduction, it must include all its overseas territories – meaning both DROM and COM (known at the time as 'DOM-TOM'). However, France's signing of the 1997 Kyoto Protocol occurred under the umbrella of the European Union. Because COM do not form part of the European Union or the European market, the provisions of the Kyoto Protocol did not automatically apply to COM and New Caledonia. Therefore, the 1990 greenhouse gas level and the extent to which France is supposed to reduce 'its' emissions did not include the emissions and participation of COM – composed, at the time, of Saint-Pierre-and-Miquelon, Mayotte, French Polynesia, Wallis-and-Futuna, and New Caledonia (UNFCCC, 2008). As a result, even though France remains individually responsible for all its greenhouse gas emissions, including all the Outre-mer – and indeed signs in the name of three oceans – the scope of the Kyoto Protocol does not extend to COM and New Caledonia.

The consequences of this exclusion should not be seen only in terms of their actual emissions, which although small, are not negligible (Cambron, 2016, p. 28). More important is the fact that these territories cannot make use of the three programs put in place by this agreement, namely the International Emissions Trading, the Clean Development Mechanism (CDM) and the Joint implementation (JI). This is also the case for other small islands known as the Overseas Countries and Territories of the European Union (OCTs), which are affiliated with European states but are not considered part of the European community: the Dutch Caribbean (Aruba, Curacao, Bonaire, Saba, Sint-Eustatius, Saint-Martin), the British overseas nonsovereign territories, Denmark's Faroe Islands, Spain's Canary Islands, and Portugal's Madeira and Azores. Similarly, France's ratification of the Paris Agreement and resulting commitment to greenhouse gas emissions reduction does not automatically include the emissions of COM (now composed of islands of Saint-Martin, Saint-Barthelemy, Saint-Pierre-and-Miquelon, French Polynesia, and Wallis-and-Futuna) and New Caledonia. For the French OCTs, this means that they do not have a seat at the table.

The exclusion from these international agreements is a result of an internal process of the metropolitan country. In principle, France's signature on the Paris Agreement represents those overseas territories that, because of their nonsovereignty, cannot independently sign the agreement. Nonetheless, because of the special legislative autonomies some of the French overseas territories (COM and New Caledonia) possess within the French Constitution, these

territories have to specifically agree to be part of this agreement, through the sole signature of France. All the Outre-mer have agreed to be part of the Paris Agreement, showing their commitment to be part of worldwide climate change mitigation efforts. Their participation was officially acknowledged on 15 June 2016, when the Minister of the Outre-mer, George Pau-Langevin, countersigned the French President's signature of the promulgation decree for the French law authorizing the ratification of the Paris Agreement. However, this agreement on their part did not lead to additional seats or signatures at the United Nations table.

Authorized neither to have their own voice nor to benefit from these international funding mechanisms, the OCTs have to make use of alternative funds made available by their affiliated country or by the European Union whenever possible. To that end, the Association of the Overseas Countries and Territories of the European Union put in place a Partnership Working Party on Environment, encouraging exchanges and 'broad-based' dialogue between the OCTs and the European Commission on specific climate change issues (OCTA, 2013). Furthermore, at the initiative of the French committee for the International Union for Conservation of Nature (IUCN), a specific program for the European overseas actors, called 'Program Best', was launched in 2011, funded by the European Union and aiming to finance conservation projects in these regions. Although that program led to the completion of local projects, the funds are still insufficient for the necessary conservation work and are not of the same level as other European Union conservation programs such as Natura 2000.

It is clear that a stable financial funding mechanism to confront climate change in the outermost regions and overseas territories of Europe is needed. The Economic, Social and Environmental Council of France (CESE), which is the third representative body of France besides the Parliament and the Senate, consisting of designated members from civil society, came to the same conclusion in its 2016 report on the value of climate justice for France. Among its various propositions, the CESE called for a specific climate justice fund for all the territories of France and the implementation, wherever possible, of specific solutions for the Outre-mer (Jouzel & Michelot, 2016, pp. 7-8). Not small island states yet not identical to the other diverse regions and departments of European France, the French Outre-mer are still looking for adequate means of confronting climate change within the existing national and international institutions.

Can the French Outre-mer speak about climate change?

The epistemic shift suggested here goes against two problematic conceptions of climate change and politics. Firstly, contrary to Dipesh Chakrabarty's assertion that the Anthropocene forces us to put aside postcolonial fractures in favour of humanity as a political subject, the Outre-mer perspectives suggest that the disputed histories, social divisions and political conflicts constitutive of human existence on Earth are necessary prerequisites for comprehending global environmental issues such as climate change (Chakrabarty, 2012; Bonneuil & Jouvancourt, 2014). From this particular perspective, France can no longer be seen as a monolithic country facing climate change, with a single location and history, but must also account for the plurality of its locations, cultures and histories.

Secondly, beyond the acute exposure, high vulnerabilities and the absence of adequate funding mechanisms, the epistemic shift suggested here also challenges the current victimization narratives of the Outre-mer facing climate change. Indeed, the geographical remoteness and the specific vulnerabilities only tell part of the story, a story in which the Outre-mer can only play the role of peripheral, silent, and ahistorical victims. Echoing the famous article of Gayatri Spivak (1994), it is also crucial to question the possibility of inhabitants and representatives of small French islands in three oceans becoming subjects in narratives as well as in political efforts undertaken to mitigate global warming. Between the major greenhouse gas emitters such as the United States and China and the growing body of

scientific literature that highlights the French overseas territories as the first victims of climate change, can the Outre-mer speak about climate change?

As it pertains to the United Nations Framework Convention on Climate Change (UNFCCC), the answer seems clear. Despite their ecological importance with respect to global warming, the Outre-mer do not have a distinct voice among the parties of the UNFCCC. Unlike their regional counter parts such as Fiji, Vanuatu and Tuvalu in the Pacific, Comoros and Mauritius in the Indian Ocean, and Saint-Lucia, Dominica, Surinam and Haiti in the Caribbean, the Outre-mer are neither parties nor observer states. Whether or not the accord signed is automatically applicable to the Outre-mer, they are officially represented by France. However, much like other nonsovereign state actors, the Outre-mer have actively attempted to influence international climate change decisions by taking part in side events and informal spaces of these international conferences (Schroeder & Lovell, 2012; Nasiritousi et al., 2016). They follow two distinct and complementary strategies: national and regional.

On one hand, the Outre-mer put pressure on the French government to ensure that their specific exposures are taken into account. In the lead-up to COP21, parliamentary representatives of the Outre-mer and local NGOs alike have called on the French government to ensure their interests as highlighted by the parliamentary reports of Sage, Letchimy and Aboubabar (Sage et al., 2015). The representatives of the Outre-mer, with the help of the former minister of the Outre-mer George Pau-Langevin, managed to have a specific space within the France Pavillon at COP21. A group of young people from French Polynesia came to Paris to participate in the Conference of Youth (COY11) ahead of COP21. Similarly, a youth student association called Science Ô organized the sole panel on the Caribbean in COP21, where Madame Pau-Langevin delivered a speech.

On the other hand, the Outre-mer have joined forces with regional countries to call on the members of the parties (including France) to limit global warming and to address its consequences. For instance, on 30 April 2015, at the OCEANIA 21 Summit held in New Caledonia, 15 territories, including small islands states of the Pacific such as Solomon Islands, Timor Leste, and Samoa as well as nonsovereign territories such as French Polynesia, Wallis-and-Futuna, and Cook Islands, issued the Lifou Declaration entitled 'Paris 2015: save Oceania!' (SPREP, 2015). Similarly, on 9 May 2015, at the Caribbean Climate event on Martinique, gathering 30 representatives of Caribbean states including Haiti and Dominica, The Fort-de-France Call (l'appel de Fort-de-France) was issued, calling upon the international community to build partnerships and to adopt an agreement mindful of the situations of the Caribbean region (DEAL, 2015). Furthermore, by joining regional intergovernmental organizations that have the observer status, the Outre-mer find an additional way to be present and make their voices heard. This is the case for Martinique, which became a full member of the Organization of Eastern Caribbean States (OECS). This is also the case for New Caledonia and French Polynesia, which became full members of the Pacific Islands Forum in 2017. Both the OECS and the Pacific Islands Forum are official observers at the Conferences of Parties (COPs).

In response to these demands, the French government has taken some recent measures. A 'green fund equivalent' amounting to 60 million euros was put in place for the year 2017 by the French government to help Wallis-and-Futuna, French Polynesia and New Caledonia. The government justified its previous choice to focus only on these three territories on the basis that, unlike the other Outre-mer territories, they did not have access to national insurance regimes when it came to natural catastrophes. On 11 December 2017 at the Climate Finance Day meeting in Paris, the new minister of the Outre-mer, Annick Girardin, announced that this fund will be extended to the other territories of the Outre-mer in 2018 (MOM, 2017).

Beyond a victimization discourse, Sage et al. (2015) show the voluntary commitment of these territories to achieve more sustainable development, to move away from strong

dependence on fossil fuels and to make use of renewable sources. These actions include the continuing improvement of scientific data of high standards. Evidently, aware of their low emissions, the contribution of the Outre-mer should not be judged solely in terms of quantitative impacts on climate change mitigation. The deputies argue instead for the exemplarity and principles that these actions show. As the main battlegrounds for adaptation to climate change, these territories can become leading examples for climate change mitigation in France, as the deputies express:

> In any case, far from being relegated to the simple status of first victims of global warming, the overseas territories want to be at the forefront of the fight against climate change, by developing exemplary strategies putting forth solutions based on both traditional and innovative practices on their territories (Sage, et. al., 2015, p. 36; translation my own).

Furthermore, this epistemic shift not only presents the Outre-mer as political subjects but also recognizes their long historical engagement with social justice and environmental preservation within their postcolonial societies. Despite the 1946 departmentalization that granted equal social and political rights, many inhabitants still point out persistent inequalities with mainland France (Dumont, 2010; Bonilla, 2015). In response to the unkept promise of equality, inhabitants led numerous political and legal actions to claim equal citizenship within France, including the protection of the natural heritage of their islands (Larcher, 2014; Ferdinand, 2015). For instance, major general strikes and social movements took place in Guadeloupe, Martinique and La Réunion in 2009, in Mayotte and New Caledonia in 2016, and in French Guyana in 2017, all of which denounced the inequalities with the metropolitan mainland and the high cost of living (Le monde, 2017; William et. al, 2012).

Although climate change is a specific matter that is addressed through dedicated international institutions, conferences and funding, many islanders do not dissociate it from other ecological issues. Climate change is instead viewed in these territories as one element of an ecological necessity to preserve the island (Sage et al., 2015, p. 32). While the 1992 Rio conference marked the birth of the UNFCCC, islanders' engagement with ecological issues began much earlier. Local environmental NGOs on these islands, such as the Martinican NGO Assaupamar, have engaged in the preservation of their environments, including the coastal mangroves, for over 35 years (Ferdinand, 2016). Here, acknowledging these actors is not an act of 'epistemic charity' intending to bring the voiceless on board, while still asserting their powerlessness. It is the real acknowledgment that, long before COP21, islanders and NGOs have effectively made possible the preservation of the very ecological systems and societies threatened by climate change.

Often, the ecological actions of these NGOs were actually against state-oriented economic policies that furthered the use and abuse of the Outre-mer's nature. Whether it was against the extractive industries in Martinique and Guiana, against the compulsive use of pesticides in Guadeloupe, or against the nuclear tests conducted on the Polynesian atolls of Mururoa and Fangataufa until 1996, the inhabitants of the Outre-mer have relentlessly engaged in struggles to preserve the nature of their islands and to assert their rights to live in a safe environment (Aldrich & Connell, 1998, pp. 184-188; Chrisafis, 2013). In other words, despite the sheer scale of global warming, the inhabitants of the Outre-mer are the very agents both of its consequences and the political efforts to face the foreseen changes.

Conclusion: the Outre-mer or the postcolonial subjects facing climate change

In conclusion, this paper has presented the Outre-mer perspectives of climate change in an effort to shed light on the situation of these formerly colonized territories, which are now

subnational jurisdictions of France. Their high exposure and vulnerability to the consequences of global warming despite their relatively low emissions call for a subnational climate justice, allocating specific funding to confront and adapt to climate change. The case of the Outre-mer points to the specific perspectives of the Overseas Countries and Territories of the European Union. Sitting in this political 'in between', being neither comparable to the other European regions of their affiliated countries nor to Small Independent Island States, these territories lack access to the international funding mechanisms for climate change and have difficulty securing the necessary funding to match their exposure and vulnerabilities.

This paper also suggested an epistemic shift in the very way one conceives both of France and its engagement with climate change. This shift challenges the approach that posits the relations of the Outre-mer and France as if they were two different political entities. From that highly disputable perspective, France is seen as a singular geographical European entity that extends its benevolent hand to care for its overseas citizens, for which the latter should be grateful. 'France' would be doing a service to its Outre-mer. This colonial gaze is not only discriminatory in the sense that it readily posits the Outre-mer and its citizens as being outside of France, but it is also factually inaccurate. The Outre-mer hold most of the French national biodiversity and, more importantly, they represent the forefront of French climate change mitigation.

Recognizing the experiences of the Outre-mer and their special importance regarding France's relationship with climate change leads to a need to write a different geographical narrative of France, one that is not narrowed down to the contours of the European mainland. The consequences of such a shift extend beyond the modification of a map during the weather forecast. It challenges the very language one uses to relate and signify the French Outre-mer experiences of climate change. This shift opens up the challenge of formulating the experiences of climate change by the Outre-mer in a manner that neither implies the exclusion of the Outre-mer from France nor subsumes their specificities into a homogenous whole. Away from the colonial portrayal of the Outre-mer citizens as voiceless victims of climate change and mere beggars of social welfare programs, this other narrative recognizes the Outre-mer inhabitants as both political actors and part of France, a multi-located France that spans across three oceans. In the face of the climatic tempest threatening these islands, the Outre-mer inhabitants call out to the horizon. What is often portrayed as a desperate cry for help in wait of an overseas saviour is but a determined call for postcolonial equality and social justice, which resounds even stronger in the wake of the tempest.

References

Actif, N., Ah-Woane, M., Hoarau, S., & Maillot, H. (2013). Indicateurs sociaux départementaux à la Réunion, Une situation hors-norme. *Insee Partenaires*, 25, 1-4.

Aldrich, R., & Connell, J. (1998). *The last colonies*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511598920

Anderton, K., & Setzer, J. (2017). Subnational climate entrepreneurship: innovative climate action in California and São Paulo. *Regional Environmental Change*, forthcoming. https://doi.org/10.1007/s10113-017-1160-2

Association of the Overseas Countries and Territories of the European Union (OCTA). (2013). Environment and climate change. *OCTA*, 12 May. http://www.octassociation.org/environment-and-climate-change

Baldacchino, G. (2010). *Island enclaves. offshoring strategies, creative governance, and sub-national island jurisdictions*. Montréal: McGill-Queen's University Press.

Baptiste, K., & Rhiney, K. (2016). Climate justice and the Caribbean. *Geoforum*, 73, 17-80. https://doi.org/10.1016/j.geoforum.2016.04.008

Blanchard, P., Blancel, N., & Lemaire S. (Eds.) (2006). *La fracture coloniale. La société française au prisme de l'héritage colonial*, Paris: La découverte.

Bareigt, E., & Fasquelle, D. (2014). *Rapport d'information sur l'adaptation du droit de l'énergie aux Outre-mer*. Paris: Assemblée Nationale.

Barrett, S. (2014). Subnational climate justice? Adaptation finance distribution and climate vulnerability. *World Development*, 58, 130-142. https://doi.org/10.1016/j.worlddev.2014.01.014

Barnett, J., & Campbell, J. (2010). *Climate change and small island states: power knowledge and the South Pacific*. London: Earthscan.

Betzold, C. (2015). Adapting to climate change in small island developing states. *Climatic Change*, 133(3), 481-489. https://doi.org/10.1007/s10584-015-1408-0

Bonilla, Y. (2015). *Non-sovereign futures: French Caribbean politics in the wake of disenchantment*. Chicago and London: University of Chicago Press. https://doi.org/10.7208/chicago/9780226283951.001.0001

Bonneuil, C. & Jouvancourt, P. (2014). En finir avec l'épopée, récit, géopouvoir et sujets de l'anthropocène. In É. Hache (Ed.) *De l'univers clos au monde infini* (pp. 57-105). Paris: Éditions Dehors.

Brasset, M., & Le Pablic, L. (2014). Entre faiblesse des revenus et hausse de consommation: enquête de budget de famille à Mayotte. *Insee Anlayse Mayote*, 3, 1-4.

Cambron, C. (2016). *Rapport autorisant la ratification de l'accord de Paris adopté le 15 décembre 2015*. Paris: Sénat.

Central Intelligence Agency (CIA). (2018). *The world factbook*. https://www.cia.gov/library/publications/the-world-factbook/geos/bb.html

Centre Interprofessionnel Technique d'Etudes de la Pollution Atmosphérique (CITEPA). (2016). *Outre-mer par territoire*, 1 December. https://www.citepa.org/fr/activites/inventaires-des-emissions/Outre-mer

Chakrabarty, D. (2012). Postcolonial studies and the challenge of climate change. *New Literary History*, 1(43), 1-18. https://doi.org/10.1353/nlh.2012.0007

Chrisafis, A. (2013). French nuclear tests showered vast area of Polynesia with radioactivity. *The Guardian*, 3 July. https://www.theguardian.com/world/2013/jul/03/french-nuclear-tests-polynesia-declassified

Daniel, J. & Constant, F. (Eds.) (1997). *Cinquante ans de départementalisation*. Paris: L'Harmattan.

Direction de l'Environnement, de l'Aménagement et du Logement (DEAL). (2015). Caraïbe Climat 2015: l'appel de Fort-de-France. *DEAL Guadeloupe*, 28 May. http://www.guadeloupe.developpement-durable.gouv.fr/caraibe-climat-2015-l-appel-de-fort-de-france-a1275.html

Doligé, E., & Vergoz, M. (2014). *Rapport d'information fait au nom de la délégation sénatoriale sur les niveaux de vie dans les Outre-mer*. Paris: Sénat.

Dupuis, P. (2009). La politique de la France en matière d'adaptation au changement climatique. *Annales des Mines - Responsabilité et environnement*, 56(4), 59-65. https://doi.org/10.3917/re.056.0059

Dumont, J. (2010). *L'amère patrie: histoire des Antilles françaises au XXe siècle*. Paris: Fayard.

Faberon, J., & Ziller, J. (2007). *Droit des collectivités d'Outre-mer*. Paris: LGDJ.

Fassin, D., & Fassin, E. (2009). *De la question sociale à la question raciale: représenter la société française*. Paris: La Découverte.

Ferdinand, M. (2016). Ecology, identity, and colonialism in Martinique: the discourse of an ecological NGO (1980-2011). In C. Campbell & M. Niblett (Eds.) *The Caribbean aesthetics, world-ecology, politics* (pp. 174-188). Liverpool: Liverpool University Press. https://doi.org/10.5949/liverpool/9781781382950.003.0011

Ferdinand, M. (2015). De l'usage du Chlordécone aux Antilles: l'égalité en question. *Revue française des affaires sociales*, 1, 163-183.

Field, C.B., et al. (Eds.) (2014). IPCC, 2014: Summary for Policymakers. In *Climate change 2014: impacts, adaptation, and vulnerability. Part A: global and sectoral aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1-32). Cambridge: Cambridge University Press.

Flanders Marine Institute (2016). *Maritime boundaries geodatabase: maritime boundaries and exclusive economic zones (200NM)*, version 9. http://www.marineregions.org

Gardiner, S. (2011). Climate justice. In J. Dryzek, R. Norgaard, & D. Schloesberg (Eds.) *The Oxford handbook of climate change and society*. Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199566600.003.0021

Gargominy, O., & Boquet, A. (2013). *Biodiversité d'Outre-mer*. Paris: Comité Français pour L'UICN.

Grydehøj, A. (2016). Navigating the binaries of island independence and dependence in Greenland: Decolonisation, political culture, and strategic services. *Political Geography*, 55, 102-112. https://doi.org/10.1016/j.polgeo.2016.09.001

Initiative Française pour les Récifs CORalliens (IFRECOR) (2011). Récifs coraliens les joyaux de l'Outre-mer. *Ifrecor*, 3 July. http://www.ifrecor.com/recifs-coralliens.html

INSEE (2017a). Taux de chômage localisés par sexe et âge en moyenne annuelle en 2015. *INSEE*, 25 July. https://www.insee.fr/fr/statistiques/2134411#titre-bloc-3

INSEE (2017b). Tableaux de l'économie française: Édition 2017. *Insee*, 2 March. https://www.insee.fr/fr/statistiques/2569358?sommaire=2587886&q=pauvret%C3%A9%20en+France

Institut d'Emission d'Outre-mer (IEOM). (2016). *2015 Polynésie française, rapport annuel*. Paris: IEOM.

Jouzel, J., & Michelot, A. (2016). *La justice climatique: enjeux et perspectives pour la France*. Paris: Conseil Économique, Social et Environnemental & Les éditions des journaux Officiels.

Kelman, I., & West, J. (2009). Climate change and small island developing states: a critical review. *Ecological and Environmental Anthropology*, 5(1), 1-16.

Larcher, S. (2014). *L'autre citoyen, l'idéal républicain et les Antilles après l'esclavage*. Paris: Armand Colin.

Lemercier, E., Muni Toke, V., -6 Palomares, E. (Eds.) (2014). Inégalités Outre-mer. *Terrains & travaux*, 24(1), 5-142.

Le Monde (2017). Un accord de sortie de crise en Guyane a été signé entre l'Etat et les acteurs locaux. *Le monde*, 21 April. http://www.lemonde.fr/societe/article/2017/04/21/un-accord-de-sortie-de-crise-en-guyane-a-ete-signe-entre-l-etat-et-les-acteurs-locaux_5115 367_3224.html

L'État Outre-mer [Special issue]. (2016). *Politix*, 116(4), 3-192.

Météo France. (2015). Le réchauffement climatique observé à l'échelle du globe et en France. *Météo France*, 7 August. http://www.meteofrance.fr/climat-passe-et-futur/le-rechauffement-observe-a-l-echelle-du-globe-et-en-france

Ministère des Outre-mer (MOM). (2017). « Fonds vert » élargi à tous les Outre-mer. *Ministère des Outre-mer*, 12 December. http://www.Outre-mer.gouv.fr/cp-fonds-vert-elargi-tous-les-Outre-mer

Ministère des Outre-mer (MOM). (2016). La dimension maritime et stratégique des Outre-mer. *Ministère des Outre-mer*, 17 November. http://www.Outre-mer.gouv.fr/la-dimension-maritime-et-strategique-des-Outre-mer

Ministère de l'écologie, du développement durable, des transports et du Logement (MEDDTL) (2011). *Plan National d'Adaptation de la France aux effets du Changement Climatique 2011-2015*. Paris: MEDDTL.

Nasiritousi, N., Hjerpe, M., & Linnér, B. (2016). The roles of non-state actors in climate change governance: understanding agency through governance profiles. *International Environmental Agreements: Politics, Law and Economics*, 16(1), 109-126. https://doi.org/10.1007/s10784-014-9243-8

Naudet, J. (2017). *Nouvelle-Calédonie, Rapport annuel 2016*. Paris: IEOM.

Ndiaye, P. (2009). *La condition noire: essai sur une minorité française*. Paris: Gallimard.

Neto, E. (2015). Linking subnational climate change policies: a commentary on the California-Acre Process. *Transnational Environmental Law*, 4(2), 425-437. https://doi.org/10.1017/S2047102515000138

Observatoire Régional de l'Energie et du Climat (OREC) (2016). *Les chiffres clés de l'énergie 2014-2015 dans les Outre-mer et en Corse 2016*. Baie-Mahault: OREC Guadeloupe.

Observatoire National sur les Effets Du Réchauffement Climatique (ONERC). (2012). *Les Outre-mer face au défi du changement climatique: Rapport au premier ministre et au parlement*. Paris, La Documentation Française.

Rezvani, D.A. (2014). *Surpassing the sovereign state: the wealth, self-rule, and security advantages of partially independent territories*. Oxford: Oxford University Press.

Roberts, T., Harlan S., Bell,S., Holt, W., & Nagel, J. (2015).Climate justice and inequality. In R. Dunlap & R. Brulle (Eds.) *Climate change and society: sociological perspectives* (pp. 127-165). New York: Oxford University Press.

Roberts, T., & Bradley, P. (2006). *A climate of injustice: global inequality, North-South politics, and climate policy*. Cambridge: MIT Press.

Saffache, P. (Ed.). (2003). *Aménagement, environnement et développement dans les départements et territoires d'Outre-mer*. Paris: éditions SFM.

Sage, M., Aboubacar, I., & Letchimy, S. (2015). *Rapport d'information sur les conséquences du changement climatique dans les Outre-mer*. Paris: Assemblée Nationale.

Schlosberg, D. (2007). *Defining environmental justice: theories, movements, and nature*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199286294.001.0001

Schneider, F. (2017). Cinq chiffres pour comprendre la colère en Guyane. *La croix*, 28 March http://www.la-croix.com/France/Politique/Cinq-chiffres-pour-comprendre-colere-Guyane-2017-03-28-1200835470

Schroeder, H., & Lovell, H. (2012) The role of non-nation-state actors and side events in the international climate negotiations. *Climate Policy*, 12(1), 23-37. https://doi.org/10.1080/14693062.2011.579328

Schreurs, M. (2008). From bottom-up: local and subnational climate change politics. *Journal of Environment and Development*, 17(4), 343-355. https://doi.org/10.1177/1070496508326432

Secretariat of Pacific Regional Environment Programme (SPREP). (2015). Oceania 21: Lifou Declaration calls for strong ambitious climate change agreement in December. *SPREP*, 8 May. http://www.sprep.org/climate-change/oceania-21-lifou-declaration-calls-for-strong-ambitious-climate-change-agreement-in-december

Shue, H. (2014). *Climate justice: vulnerability and protection*. Oxford: Oxford University Press.

Spivak, G. (1994). Can the subaltern speak? In P. Williams & L. Chrisman (Eds.) *Colonial discourse and post-colonial theory: a reader* (pp. 66-111). New York: Columbia University Press.

United Nations Framework Convention on Climate Change (UNFCCC). (2008). Frequently asked questions. *United Nations Climate Change*, 25 April. http://unfccc.int/ghg_data/online_help/frequently_asked_questions/items/3826.php

United Nations (1982). *United Nations Convention on the Law of the Sea of 10 December 1982*.

Vermeren, P. & Ferdinand, M. (Eds.) (2018). Politique du corps postcolonial. *Asylon(s),* 15. http://www.reseau-terra.eu/rubrique313.html

Walsh, K.J.E., McBride, J.L., Klotzbach, P.J., Balachandran, S., Camargo, S.J., Holland, G., Knutson, T.R., Kossin, J.P., Lee, T.-c., Sobel, A., & Sugi, M. (2015). Tropical cyclones and climate change. *WIREs Climate Change*, 7(1), 65-89. https://doi.org/10.1002/wcc.371

William, J., Reno, F., & Alvarez F. (Eds.). (2012). *Mobilisations sociales aux Antilles: les événements de 2009 dans tous leurs sens*. Paris: Karthala.

Zellentin, A. (2015). Climate justice, small island developing states and cultural loss. *Climatic Change*, 133(3), 491-498. https://doi.org/10.1007/s10584-015-1410-6

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Climate change perceptions and preparation in the United States territories in the Pacific: American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands

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ABSTRACT: The association between and among climate change, preparation, and perceptions on islands is becoming more commonplace—but what about on extraterritorial land governed from thousands of miles away? This article consists of on-the-ground fieldwork and interviews speaking with decision-makers and leadership personnel in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands on the following topics: how climate change is addressed, what the general attitude on-island is towards climate change, if islands' proximities to independent countries affect the territories' preparation, and if being a part of the United States is considered an asset in planning for climate change. The results from the study show that up until very recently, climate change was not readily discussed, and, when it had been, it was often only discussed with concern for ocean life. Additionally, respondents lamented that often their non-US neighbours were able to better prepare, but US territories were either outright excluded due to their tertiary sovereignties or due to lack of representation from the Federal Government at meetings. Research herein illustrates that being a territory of the United States was considered an asset in many respects due to the hypothetical protection and funding available in the event of major disaster. An emerging theme from the study is that the American territories in the Pacific sit within the margins and periphery of climate-change planning within the United States and are behind many of their neighbours in both their perceptions and preparation efforts of the effects of a changing climate.

Keywords: American Samoa, climate change, Commonwealth of the Northern Mariana Islands, governance, Guam, Pacific, territories

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Introduction

Due to the precariousness of climate change, islands and islanders have captured the world's interest, most recently due to recent extreme cyclonic events in the Caribbean affecting both sovereign nations and territories. Unlike the immediate shock and destruction of a hurricane, it is the underlying long-term stresses—such as saltwater intrusion to the freshwater lens—that have more often led islanders to relocate due to the loss of arable land, increased nuisance flooding, and other severe events (Tompkins et al., 2005, p. 20).

A dilemma islanders face is the gridlock-based inability to adapt to the current and forecasted effects of climate change because of certain political boundaries—also recently evidenced in places such as Puerto Rico and the Virgin Islands (Selter, 2015). Because no prior research has analyzed or attempted to understand how the United States Territories in the Pacific have anticipated, planned for, or seek to handle the current and forecasted effects

of climate change, this article endeavours to obtain these responses directly from the islanders making and being affected by these decisions—or the lack thereof.

Within island states around the world, including those within a territorial type of governance and arrangement, a dearth of intra-country and inter-country transportation, limited wealth, visa and employment issues, and limits to free movement quash a potential stressor-release to climate change (Bedford, 2008, p. 5; Ware, 2005, p. 236). In addition, the lack of robust international standards addressing climate change can stop cooperation at these boundaries; therefore, if a consensus can be reached, who stands to gain from adaptation and mitigation (Page, 2008, p. 556)? These questions surrounding the impetuses of decision-making and agreements prove valid in the forthcoming research as islands describe their relationships and abilities to interact with one another across the Pacific.

Problem statement

Many of the previous Pacific Small Island States' (PSIS) studies have focused on independent islands' climate-change forecasts, imminent exposure to climate-change effects, and the lack of political and related resources for coping with those effects (Betzold, 2010; Docherty & Giannini, 2009; Jacobs, 2005; Robinson, 2015; Schofield, 2009; Weir & Pittock, 2017). Additionally, studies have shown that island assessments often ignore other development-related issues on islands with the blame inadvertently shifting to a catch-all climate-change category, when, in fact, other social and infrastructural challenges abound and need to be addressed (Kelman, 2014). Similarly, even when climate change is analyzed with regard to related challenges, the extraterritorial lands of countries—whether they be nearby or halfway across the globe—are often left to the margins of these analyses (Schwebel, 2018a).

This study examined an understudied subset of PSIS quite overlooked when discussing resiliency, specifically how United States Territories in the Pacific self-identify with respect to climate-change planning: American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI). It should be noted that American Samoa and Guam are territories of the United States, although with differing forms of government and territorial arrangements with the United States. The Commonwealth of the Northern Mariana Islands (CNMI) is a commonwealth of the United States and is not formally a territory. However, since all three island groupings are technically referred to as United States Overseas Territories, for the purposes of this paper the term 'territories' will be used to refer collectively to American Samoa, Guam, and CNMI.

Context and literature

Francois Taglioni (2011, p. 45) explored the concept of insularity and how island states are smaller types of spaces that grapple with or excel at the notion of being somewhat removed from the world. The ways in which the islands in the study—American Samoa, Guam, and CNMI—as American Territories are insulated from the mainland of the United States, and how the governance of those rules affect how the territories contend with issues of climate change, is pertinent to unearth. For these reasons, specific interview questions in this paper endeavour to uncover how states in a geographical region may or may not approach complex issues in a similar fashion.

Speaking to collaboration and joint environmental decision-making, the "interstate cooperation around shared interests is said to be essential if 'inherently transnational' problems are to be addressed effectively"—but do all states view the effects of climate change as truly transnational (Lipschutz & Conca, 1993, p. 328)? Aside from intercountry differences in the creation of environmental policy, "nonstate actors […] influence the policies of individual state actors toward global environmental issues as well as the international negotiation process"

(Chasek et al., 2010, p. 113). In the case of the US Territories, are they, in fact, non-state actors within the United States of America? Seen below, different respondents' interview responses shed light upon differing influences and influencers that have had some effect on how decisions are made on-island.

The importance of governance as related to collaboration, negotiation, and joint environmental decision-making rests within the collaborative relationships among states, groups, or regimes. Yet, "interlinkages of parallel policies and regimes within a horizontally and vertically segmented governance system" can sometimes be the source of "divergent policies in global environmental governance" (Biermann, 2004, p. 12). The US Territories illustrate these segmented and siloed systems as the horizontal and vertical distance of the United States spans almost a dozen time zones with multilayered government systems in place.

In the mid- to late 20th century, "regionalization was [...] considered to be the solution to the constraints imposed by smallness" within small islands (Grote, 2010, pp. 171-172). Through these types of designs, islands or other regionally collaborative states can focus on "principles that make for more successful management of common pool resources at the local level," no matter whether the resource is migrating schools of tuna, carbon emissions, or agreements on sea level and state boundaries (Bernauer, 2002, p. 10). Agreements like these sometimes can tie decision-makers' hands, keeping them from achieving more or perhaps from achieving what the decisionmaker originally sought to entertain (Ostrom, 1990, pp. 12-13). For example, a hypothetical collective decision of Pacific countries to limit harvesting of bêche-de-mer could theoretically increase the population of the species by halting overfishing, but at the same time if the catch limit is still too high, it would prohibit individual countries from imposing more stringent standards since discord could ensue by breaking away from the regional pact.

Lastly, since some stakeholders and agencies are under the impression that all small-island states are in immediate, dire need for migration and relocation of their residents, they are unintentionally giving the message that agencies, islanders, and their leaders "had effectively given up on mitigation measures to avert future impacts of climate change" and are now looking for relocation assistance (McNamara & Gibson, 2009, p. 480). This type of reaction is related to the opinion expressed by some entities about whether it is worth investing millions of dollars in a vulnerable PSIS that is home to 10,000 people versus using funds for further-reaching projects in more populated locales.

Methodology

All research (site visits and semi-structured interviews) was conducted within the Pacific region, specifically American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI) during the period of January through April 2014. The data was transcribed between May through July 2014 and was coded by the same researcher who performed all interviews. The transcribed data were then presented to and reviewed by a research team familiar with the content. This research team did not find any concern or implicit bias presented within the coded material and associated research.

A semi-structured interview "allows the researcher to cover a specific list of topic areas" with the flexibility to follow up on and explore the answers given by the interviewee (Jarratt, 1996, p. 9). In situations with only one opportunity to interview a person, semi-structured interviewing "maintains discretion to follow leads" and is guided by a standard interview method that the researcher uses during the process (Bernard, 1988, p. 205). On each location a standard of interviewing at least 10-12 people under these aforementioned categories was implemented and achieved. Follow-up questions to those listed in Table 2 were not normally asked unless a participant began explaining a concept that was unfamiliar to the interviewer or if the interviewee returned to a topic from a prior question.

These interviews were held with islanders who were involved with climate-change planning on the island. Initial contacts were found through a list of stakeholders in their Climate Change Action Plan (CCAP) or most appropriate document. Additional interviewees were found by asking already-interviewed islanders about additional people on island to contact. These were people who were involved in many aspects of climate-change planning or preparation, ranging from a formal position to a community leader: in other words, the snowball method. The spectrum of interviewees ranged from residents of the island to territorial and federal employees to environmental organization members, business associations, companies, and others. The ratio of men to women interviewee respondents was near equal and the age range of respondents ranged from recent college graduates through retirees. In total, as the findings from the research occurred within a qualitative and analytical environment, there are limitations as selection of the interviews, coding, analysis, and assessment are all prone to human error, although many quality assessments and checks were utilized throughout the research process to lessen any intended and non-intended biases.

Institutional Review Board (IRB) approval was received from Temple University. American Samoa and Guam both required additional IRBs to conduct human research (interviews). In total, IRB approval was received from all necessary entities.

The interviews ranged from approximately 30 to 45 minutes in length. The data were stored behind password-protected drives. Participants were told as part of oral consent that the foreseeable risks or discomforts were discussing a timely issue on which they may have a strong opinion; they were also notified that the benefit they could obtain from the research would be to contribute to the better understanding of climate-change policy in PSIS. The researcher provided participants with confidentiality by neither identifying the interviewees' name and position, nor identifying which of the American Territories the interviewees hailed from. Only the researcher had access to a list of participants' PSIS.

Interview results: United States Territories in the Pacific

Data and response overview

The goal of approximately 10-12 interviews (see Table 1) in each location was successfully reached, using a 15-question semi-structured interview format that was similar to but not identical to the questions in the article (see Schwebel, 2018b). Because of IRB protocols PSIS were given randomized identification from $PSIS_{500}$ through $PSIS_{999}$ to alleviate any concern about piecing together PSIS' identities. For example, $PSIS_{555}$ and $PSIS_{679}$ and additional identifiers could reference the same PSIS.

Table 1: Pacific Small Island States (PSIS) and number of interviews.

Pacific Small Island State	Two-Letter Abbreviation	Number of Interviews
American Samoa	AS	11
Guam	GU	13
Commonwealth of the Northern Mariana Islands	NM	11

Quotations and analysis within this study concentrate on four of the questions—numbers 1, 2, 6, and 8—as they sought to understand perceptions of climate change in the American Territories (see Table 2). These questions were chosen in conjunction with acceptable norms with the approval of the aforementioned IRBs within a large research study that sought to understand climate-change perceptions and understanding across the Pacific Region. The specific questions chosen within this manuscript focus predominantly on the relationship between the islands and their neighbours and host countries. Moreover, the

quotations chosen represented the major and broad sentiments expressed during the participants' answers. Although it is possible that some interviewees were either duty-bound or felt allegiance to a specific position, respondents often included comments referencing the anonymity of the interviews, enabling them to talk freely. Some respondents who worked for higher-level authorities sometimes cited their managements' official take on an issue, saying that it was the official position and sometimes countered with why they felt differently.

Table 2: Interview questions for government officials, decision-makers, project managers in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. **Asterisks replaced the name of the appropriate PSIS during the interview. **Questions in bold illustrate the questions from the research used within this analysis.**

1. How would you describe the ways in which climate change is addressed in (**)?
2. What would you say is the general attitude in (**) toward climate change?
3. How would you describe (**'s) climate change plans, climate change policies, and climate change projects?
4. Does (**) work with other PSIS in addressing climate change?
5. Do you happen to be familiar—and if so, how—with AOSIS, the Alliance of Small Island States or CROP, the Council of Regional Organizations of the Pacific?
6. Does ('s) status as a United States' territory near many other PSIS that are not part of the United States have any effect on climate change preparation in (**)?**
7. On a scale of 1–10, how would you describe the degree to which (**) is adequately preparing for climate change, and why?
8. Although ('s) status is not a "state" of the United States, do you think that being part of the greater network of the United States is an asset to (**) in preparing for climate change?**
9. If there were an item or two that you think (**) is excelling at in terms of climate change preparation, what would that be?
10. Do you think any of the physiographical (geographical) or historical aspects of (**) affects the type of climate change plans, policies, and projects being instituted?
11. Do you think any other PSIS are in a similar situation to that of (**), and why?
12. How would you describe the similarity between the intended goals of climate change plans, policies, and projects, and what is actually being done in (**)?
13. If there were one or two items that you could change regarding how climate change is handled in (**), what would it be?
14. Is there anything else in reference to the broader discussion regarding climate change in (**) that you would like to mention or discuss?
15. Is there any person in particular or any project site that you would suggest I contact/visit to obtain more information regarding climate change plans, projects, and policies here in (**)?

Interviewees' responses

Below are the bolded four questions from Table 2, along with the three different island groupings with their responses. American Samoa, Guam, and The Commonwealth of the Northern Mariana Islands are all referred to as locations below. However, the first location in Question #1, for example, may not be the same island grouping that is listed as first location in Question #8. The three island groupings were randomly assigned their name as either location #1, location #2, or location #3 for each of the questions to guarantee non-attribution of interviewees and to prohibit piecing together the identity of the islands and the identities of respondents.

Interviewees' responses to Question #1

Within the first location for Question #1, respondents state that they "don't think necessarily addressing climate change directly is the most effective way in dealing with it" because it is such a large concept to both educate and grapple with, so "if you address something more like flooding" or food shortages, you are framing it in a way that is not using the words climate change ($PSIS_{671}$). Along those same lines another said that the "average person is […] is sort of vaguely aware and interested and now other people have heard world sea-level's rising and they get the constant stuff from the media and what they see on sort of popular" but that it is still "not really a major concern of most people" as it does not sit on their principal radar ($PSIS_{893}$). Others were in agreement in the lack of addressing climate change due to "some of our neighbors in the region that I think to some degree are feeling much more concerned about the impacts" such as king tides where the "changes in sea level is causing damage to their taro fields and so it's a very much more direct impact than we tend to think about" ($PSIS_{804}$). The last respondent concurred with the others saying, "I would say that climate change is being addressed in a very sporadic manner" and that "it's mostly coming from nonprofits" on-island rather than from the island government ($PSIS_{739}$). In these cases, nonprofits refer to foundations, community groups, and religious organizations.

The second location had respondents stating that climate change is "I think beyond what's happening with the reefs and sea level rise" while the "majority of the residents here really don't understand [...] they automatically tie it into the reefs, and how it affects the reefs" ($PSIS_{737}$). This sentiment is echoed with another response discussing how the island has "been able to leverage a lot of funds for research, specifically relating to coral reefs and fisheries and climate" ($PSIS_{803}$). An additional respondent said that they would like to "go to each village and create sea level rise maps and give it to them, here, look, look this is simulation. Now, I'm not saying that you're going to drown in 2 years or so, but for your children" you may want to make future plans ($PSIS_{602}$). Lastly, it was stated that "I don't think there's much going on in the territory. And, I'm probably aware of climate change because I'm in the meetings [...] however the community is not really engaged in any activities or whatever that other countries or territories are doing because I'm not sure if the whole territory is aware that climate change is a problem here" ($PSIS_{858}$).

In the third location a respondent stated that "climate change is fairly new" on the island ($PSIS_{788}$), whereas another stated that they would want to "get a group together and talk about this issue and how we are going to address it for islands" ($PSIS_{978}$). The last two respondents wished to pinpoint "where maybe some of our more resilient ecosystems and reefs are" ($PSIS_{627}$), with the last stating that climate change "is probably something we haven't really discussed until maybe the last year and a half" ($PSIS_{678}$).

Interviewees' responses to Question #2

Question #2 pursues a more in-depth look into how climate change is described in each of the islands. In the first location the respondent stated that there is "not lack of awareness that climate change is occurring globally, the issue is that it's not very clear what that change will mean for [★★] in particular" ($PSIS_{944}$), with others saying that "people are quite honestly apathetic, I don't think it's on the radar" ($PSIS_{700}$). Climate change is not a primary worry in the jurisdiction because "a lot of other things that are more immediate [...] and climate change is hard to get your hands around [...] such a long-term thing doesn't fit well with politics which people are trying to get reelected a lot" ($PSIS_{954}$). When there is interest in preparing for climate change it is monetarily based as "people who are following the money and there's money for climate-change remediation, adaptation and so their people are saying of course yea [...] we need this money" ($PSIS_{920}$).

In the second location the "general attitude in the government seems to be more along the lines of oh this is something we should worry about because everyone else is worried

about it" ($PSIS_{892}$), and another reinforces the newness of climate change by saying, "we just started doing the climate change as the, as a group of all government agencies, yea. So not a lot of people are aware of climate change, so that's why we're trying to educate" ($PSIS_{853}$). Others state that on-island they "definitely need to do a better job of doing public outreach. I wouldn't say there's a negative attitude, I would say there is just a lack of understanding" about what climate change is ($PSIS_{719}$), whereas most people acknowledge and try to understand it but they "don't have any ideas on what exactly it means for them and their lives going forward" ($PSIS_{575}$).

In the third location, respondents state that because "this is a very religious area, and people just kind of say oh well, you know we just rely on the Lord to help us if anything and, but for me, I feel like the Lord helps those that help themselves, so, I am concerned" ($PSIS_{705}$). Religion is mentioned again with respondents stating that the "general public needs also to be aware of it, so what I don't see and what I don't hear in the radio [...] in the media, in the schools, in the church groups, because that's one of the target audience here is the church groups" ($PSIS_{815}$). The final respondent stated that regarding climate change, "I think people aren't as sure what to do about it, but they're convinced that it's going to be a problem" ($PSIS_{764}$).

Interviewees' responses to Question #6

PSIS Question #6, regarding the territorial statuses of the islands, asked what they think of their non-state, non-sovereign status with regard to climate change. In the first location the respondent lamented that it is "not only with climate change, but it's in everything else, we just get whatever the leftovers are [...] okay we'll give you this, we have some leftover stuff for you guys, sorry to say that, but that's just how it is" ($PSIS_{904}$). That view is supported by another respondent stating that territorial status is "slightly detrimental" but it does make "us a little more independent as far as our climate-change preparations go. We're able to work with other territories [...] and we're able to work through [regional environmental organization] in certain ways," yet even with that advantage, within [regional environmental organization], "it's kind of a little challenging because it is we're kind of on the outside looking in" ($PSIS_{923}$). This sentiment expresses the concern of territories not being able to fully participate in Pacific regional associations as participation is often reserved for independent countries, not semi- or partially autonomous islands. When the US Territories are able to participate in climate-change activities involving those outside of the territory, they "look at us like we got a lot of money [...] every time they look at us they feel like we got all this US dollars [...] It benefits us but it also creates hardship for us, because there are lot of areas where we're not similar to the States and their jurisdictions" ($PSIS_{641}$).

The reality of being an island and part of the United States hits home with this quotation:

> I was representing the territory [...] And I said, oh, but nobody from the United States is here?, I am here, then we should be acknowledged as members of the US and they're like, oh no, because you guys would have to go through the US, the US people will speak to them [...] And then the way the other islands are treating (★★) is like that, like okay we're not going to talk to you because the US, we have to have a representative from the United States. ($PSIS_{620}$)

The second location, when asked about their sovereignty and status, responded that the "fact that there are some other Pacific Island states that are already having some pretty serious impacts from climate change has sort of, I think it's both helped and hurt a little bit our attempts" at trying to proactively plan ($PSIS_{703}$). Similarly, another respondent stated that it "doesn't seem like our being part of the US [...] hampered our, our acceptance of climate change here. I think if anything we kind of embrace it more because we want to" ($PSIS_{767}$). Interestingly, sometimes it is the new-fangled forms of governance that get in the way, as one

responded stated that it is "just the conversation you have with how are you going to address this and in Palau they're like oh, the elders just said we're going to plant more taro, boom, done, everyone listens to it. Here it's like well, you can't" ($PSIS_{834}$).

Some of the additional difficulties with being a territory trying to plan for climate change while part of the United States is that some "think that it does and I'm trying to remember the example where we wanted to go to this meeting and we couldn't go [...] We're trying to get the Governor [...] they both were like reluctant to sign it because they said, I think we have to go through the US Department of State before we sign anything like this" ($PSIS_{837}$).

In the third location respondents spoke to the benefits of territorial status such as "because we're a US Territory they're going, if it's big huge disaster does come in [...] it will get taken care of by the United States" while acknowledging that there are "pros and cons with being a territory [...] one pro of being a territory of the United States but if like a terrible, horrible horrific emergency or disaster happened you do have the US which has a lot of financial support to kind of helping you out" ($PSIS_{962}$). The next respondent stated that the US has "huge sources of government revue and this security that you have being a totally part of the US" benefits and allows the jurisdiction to proactively plan for climate change ($PSIS_{591}$). Other respondents more cautiously stated that the relationship between territory and the US is "an understanding that our place in the Pacific [...] and our relationship with the United States, maybe we are the canary in the mine," and that through association issues surrounding climate change can be discussed. ($PSIS_{959}$). This outreach from the United States is already happening according to the last respondent saying that there are "more resources coming from the US government like sponsoring [...] more workshops" even though sometimes it is available to independent countries and or the territories whereas "other kinds of funding through [...] the European Union that won't come [...] but it will go to our neighboring countries" ($PSIS_{563}$).

Interviewees' responses to Question #8

PSIS Question 8 attempts to evaluate features of the territories. In the first location the respondent stated that "we have more access I think to direct US funds, but we don't have access to international funds" ($PSIS_{855}$), and is further supported by another respondent saying that territorial status is "a good thing and maybe a bad thing because good thing is that we're part of the US and we can get all this funding, bad thing is sometimes we want to be engaged more in these other networks and we can't because US Department of State" would have to do that and it happens very infrequently ($PSIS_{618}$). This opinion is further solidified by a respondent in the jurisdiction stating that it is "definitely like a double-edged sword to where it helps [...] we get a lot of the funding opportunity to implement these programs and projects but the difficult part is we don't fit in with a lot of the plans or boxes that are being developed for like the states, and even Hawaii which may be the closest analog" ($PSIS_{593}$). The idea of a two-edged sword is further supported by the response stating that "it's bigger than just climate change, right [...] Is it good to be attached to the US or not? Sometimes yes sometimes no" ($PSIS_{840}$).

The second location spoke positively about being part of the greater network of the United States since it "is an asset having the United States [...] because you'll get a lot of help you get a lot of expertise to help guide" and without the United States' assistance that might not happen" ($PSIS_{955}$). The next stated that "I think that we are at the best position we're at now [...] so if they're going to have a mandate on climate change, you're going to follow it, or you're not going to be funded for it" ($PSIS_{856}$). Further supporting this opinion is the idea that it is "an asset in the availability to different resources, especially federal agencies bringing in people who have expertise in a lot of different areas" ($PSIS_{759}$). However, one respondent did express great frustration in that "it's a shame to be associated with one of the most powerful nations in the world, and just not have a national policy on climate change [...] we

have about 12 federal agencies that sit in on the table. They agree on everything but having the word, term climate change on paper" ($PSIS_{864}$).

In the third location respondents did say that the United States is an asset in "preparing for anything because especially to the extent of the preparation of all federal money," but at the same time "we perceive ourselves to be kind of second-class citizens in a lot of ways because we don't get, you don't have representative in Congress, but you get a delegate, but they don't vote" ($PSIS_{966}$). Other examples say that theoretically the relationship is an asset but "in dealing with climate change, absolutely [...] I would envision the answer is yes, but what I've seen so far is no" ($PSIS_{805}$).

Additional respondents stated that it is an asset, but simultaneously small islands are "the most impacted by what everyone else in the world does. And I don't think combined we get enough funding whether internationally or from the United States to somehow reduce the impacts that it's causing on our island states" ($PSIS_{604}$). Lastly, the final respondent states that "it's a trade-off [...] it's a strength in that we [...] have access to certain programs that we wouldn't have access to [...] we get a lot more benefit from being part of the US than we lose" ($PSIS_{583}$).

Results and discussion

The first question (#1) asked respondents to describe climate change on-island. Overall, climate change is viewed as a newer topic focused on reef and marine issues. Barriers to education, a vague interest and awareness by locals, and a feeling of being behind neighbouring islands is suggestive of insularity with minimal linkages to the United States (Taglioni, 2011). A *hyperinsular* relationship is present insofar that isolation to federal climate policy exists within the islands as it is the norm although not necessarily sought-after (Taglioni, 2011, p. 56). Responses varied, but often had environmental and coral reef-based perspectives speaking to the "imagined territories" or "imagined regions" questions discussed in regional governance, as if climate change in this territory did not really have much effect on humans, excluding issues related to coral reefs (Balsiger & Debarbieux, 2011, p. 3).

Other ways in which climate change was addressed included a focus on resilience through community education, although it was stated that the educational aspect is still within its infancy. Thus, if policy is not coming from the federal level it is unlikely that a bottom-up approach "whereby two or more states join common cause" to initiate climate-related policy will spring forth from the territories (Rabe, 2008, p. 124) Respondents discussed the newness of climate-change discussions and programs on-island. Once more, coral reefs and biologically related activities were highlighted, but there was a prevalence of infrastructure protection or relocation mentioned by several respondents. Ironically, the idea of "sovereign peoples with innate rights to territory" is firmly rooted in the subject matter; yet, on territorial outposts, they often lack both sovereignty and innate rights to the mainland country as citizenship is a bit complicated if any of the residents of this study's islands wished to relocate to the mainland United States (McNamara & Gibson, 2009, p. 476).

The second question (#2) asked about the general attitude of climate change on-island. There exists the indication that climate-change education, advocacy, and discussion are in nascent stages. There was also the idea that communities notice changes in precipitation or erosion and sometimes attribute these changes to climate change, but the term 'climate change' becomes a catchall for any environmental anomaly and little education goes towards educating residents, visitors, or tourists (Becken, 2005, p. 391).

Islanders spoke to the uncertainty regarding how to approach climate-change issues where they may be a priority of sorts, but other issues supersede climate change on the list of priorities. In addition, questions about incoming migration from the region, not understanding how to adapt to a changing climate, and looking to climate change as a source

of money for the island were topics brought up by interviewees, which could cause disagreement on a unified trajectory (Julca & Paddison, 2010; Ostrom, 1990). On-island interviews described the general attitude toward climate change as being something new and decision-makers were unclear how to educate residents. Slowly, portions of the government are taking the lead along with nongovernmental groups, but the momentum is slow. The general attitude toward climate change on-island was that it is just starting and is not affected by denial seen on the mainland. Respondents say it is somewhat affected by the religious population on island where planning for tragedies was either an invitation for calamities to happen or were going against an intended destiny designed by a higher power. Although there is a concern on this island that people do not know as much as they could or should, they may believe the future is in the hands of a higher being, or that until they see the effects firsthand, it is not something to worry about. If some of the barriers to working alongside neighbouring PSIS that are not US Territories were taken down then common pool resources could doubly serve to successfully manage and invite management of resources to reduce the hesitancy in planning for climate change (Martin, 2010).

A common response stated that there were more pressing items, such as the economy, that surpass climate change as important topics for the public and elected decision-makers, who are without regard for or do not notice the intrinsic "global applicability" between the economy and climate change (Mycoo & Gobin, 2013, p. 449). There is not reluctance to adapting so much as there is confusion about how and what the foreseen impacts of climate change are locally. A lack of understanding of what climate change is, as differentiated from other environmental factors, is causing residents and decision-makers to falter with meaningful action and preparation. Items such as the constraints of regional migration and lack of currently observed localized effects of climate change all affect the attitude toward climate change in the PSIS of the American Territories in the Pacific—a twist on the environmental decision-making spoken about by Grote since the US mainland controls migration decisions (Grote, 2010).

In the third question (#6), islanders were asked if their status as a US Territory alongside other non-territories affects climate-change preparation. Respondents echoed that yes, the territory's status in the region affects regional cooperation in terms of how climate change occurs. Almost all interviewees said that although there are some positive points about being part of the United States (as well as mentioning their patriotism and happiness about being part of the United States), there are many prohibitions and logistical bureaucratic processes associated with being a territory, creating a difficult environment in which to work collectively with other PSIS—explicitly discussed by Lipschutz and Conca when portending sound development policies (Lipschutz & Conca, 1993).

Respondents often answered that being a territory of the United States hampers cooperation with other PSIS, although a fair number of respondents believed it did not greatly impede coordination. Some interviewees acknowledged that they were lucky to be living on (★★) versus some of the independent PSIS that are more prone to feeling the effects of climate change today due to a twist of insularity (Taglioni, 2011).

Other respondents stated that territorial status does not affect the situation, and even when it does, it is a good thing. The examples most often given by interviewees were that being part of a larger country is the beneficial power exerted by the mother country via money and resources and power, as well as a sense of assurance in case of natural disasters (Hawksley, 2009). This viewpoint is introspective because it looks at what the islands accomplish as part of their association with the United States and the by-product of resilience. An alternate opinion on the matter is that the American Territories are full of firsthand knowledge and frustration, with interviewees voicing the obstacles that have stopped them from participating in climate-change preparation because they are territories among a sea of

independent PSIS—the opposite of the argument and best practices offered by regionalization and cooperation (Grote, 2010).

Although territories are often invited to regional meetings on climate change, they have to sit out of the decision-making arenas because only Department of State personnel are at the decision-making level of their island peers. However, the Department of State rarely sends a representative. If it does, that person is often from Washington or New York, without much knowledge regarding Pacific territories, creating confusion and non-movement as sovereign states, with decision-making powers having trouble enough advancing sensitive topics forward on legal issues relating to the effects of climate change (McAdam, 2010). Thus, there is a spectrum of two dialogues surrounding American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands: one in which their status as territories is detrimental to self-fulfilling and forward-thinking planning and another where they are supposedly provided for by a large power, providing a guarantee of assistance that interviewees stated other PSIS would be jealous to have in the event of a disaster or natural phenomena. Both options are powerful and could be used as guidance toward creating stronger, more resilient climate-change planning tools in the future for the American Territories in the Pacific.

The final question (#8) was similar to the previous one, yet outright asked if being part of the US was an asset in climate-change preparation. Respondents stated that yes, being aligned and supported by the United States was undoubtedly an asset to climate-change preparation. But, there was a vocal minority among the interviewees who maintained that there is a balance between the positive and negative effects—which are often associated with the relationship between a territory and host country. Interestingly, several respondents actually said that if there were any shortcomings, it was more likely to be a lack of initiative and progress on-island versus a lack of United States-based policy. However, some stated that the relationship is simultaneously helpful and hurtful to advancing climate-change-adaptation planning. In almost all the cases in which respondents said that it was helpful, that helpfulness focused on funding, research, and availability of experts from the mainland.

Respondents' answers addressed how the American Territories in the Pacific reacted to the question of whether being part of the United States was an asset—or not—in preparing for climate change. The island jurisdictions believed that funding was paramount for preparing for climate change, but there needs to be a bit more accessibility and integration with the region. At the same time, it was noted that this is not the only area in which the relationship between the territories and their neighbours create a grey area in cooperation—something that changes depending on what type of leadership is at the helm (Jacobs, 2005). From these interviewees' statements and quotations, the next step in climate-change preparation would be alleviating the difficulties, inconsistencies, and roadblocks hampering the otherwise beneficial relationship that the island territories have with the United States. For example, the US Department of State should reach out to the islands to better understand their viewpoints and the obstacles they face when they cooperate with neighbours so that islanders can speak for themselves or have an available State Department representative, such as a designated liaison from Washington who is familiar with islanders' culture and points of view.

The interviewees' responses at the American territorial level helped uncover some of the mysteries of climate-change adaptation success and failures within regional cooperation or its nonexistence. First, PSIS and their residents need an understanding of climate change and the plans to address these impacts. Although some communities have achieved this, it is lacking in many communities. Fixing this problem would aid in localizing both the perceptions and understanding of impacts and strategies to better adapt. Most policies in place are focused on coral reefs and marine systems, which should be a focus, but not the sole focus. These policies are likely a vestige from the days when both a definition and ability to talk freely about climate change led to lackluster policies when robust ones were needed. Regional linkages in the territories are found in three components: the American Samoa and Samoa

Cohesive Initiative; the Micronesian affinity among Guam, the Commonwealth of the Northern Mariana Islands, and the surrounding states of the Marshall Islands, Federated States of Micronesia, and Palau; and, Honolulu as an administrative hub for much of the Pacific and corresponding American territories.

The question of how to better coordinate within the region was hindered both by governments in the territorial governments choosing which associations they want to participate in (with varying rates of acceptance), contrasted with the independent PSIS that belong to most, if not all: United Nations negotiations, fishing policies, sub-regional cooperation, Pacific Islanders networks, and the like. Territorial CCAPs are nearly impossible to find on any government website, whereas the 50 states are coordinated in their administration to have certain reports easily disseminated through their websites. Similar to the American Territories, it is sometimes difficult to find sovereign states' CCAPs on their particular websites. Nonetheless, the relationship with the United States is overwhelmingly viewed as an asset to residents in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands, but environmental protocols, enforcement, and liaising restrictions need renovation.

Interestingly, the self-articulated island resilience from interviewees is perceived as high within the American territories in the Pacific because of past natural disasters, war, military bases, and past hazard preparations not falling under the umbrella of climate-change adaptation or preparation and is often referred to as disaster and risk reduction policy. The geographical and historical aspects of islands—such as high island types—do affect the local contexts of the islands. Surprisingly, islanders did not readily point out any key physical characteristics of their islands as making them more resilient than neighbours. They also did not regularly point out differences in governance and territorial status with the United States versus the technical territorial or commonwealth status. While there is a cultural and geographical similarity to other PSIS, the territories in this study lack urgency in preparing for climate change while other PSIS more urgently prepare (see Schwebel, 2018a). The three territories all referred to inherent resilience on-island, such as topography and height, assumed assistance of the US Government based on prior examples, and upward mobility within the region and US. There were, of course, concerns mentioned throughout this manuscript, but they mostly addressed a far-off and hypothetical disaster. Finally, a greater understanding of climate-change predictions, better outreach, and community education can lead to better adaptation strategies.

Conclusion

This study validates that climate analyses and policies in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands were located at the periphery of analyses and implementation as prior studies illustrate how independent states are the principal focus in climate-change planning and adaptation (Weir & Pittock, 2017). The situation is, indeed, complex when dealing with how the United States Territories work with each other and their neighbours. While previous research has looked at potential climate-change adaptation 'success' in anticipating and planning for the forecasted effects of a changing climate via plans and legislation (see Robinson, 2017; Schwebel, 2018b) there is no alternative to dealing with the unilateral sovereignty—the United States—in charge.

It is unlikely that either a PSIS or a territory would withdraw itself from the rules that are imposed on their actions or behaviours from their host country, because it would change the very essence of the individual, in addition to causing all forms of other difficulties. Yet, as was just recently observed in the other two inhabited United States territories—Puerto Rico and the US Virgin Islands—responses to high-profile disasters such as Hurricane Maria in 2017 illustrate the extant vulnerabilities currently in place and the difficulties with getting

assistance to islands, which could add frustration to societies that heavily rely on a (false) sense of assurance from their host country.

Lastly, while some respondents were visibly and audibly frustrated by the lack of planning, understanding, ability to work with neighbours, and an overall lack of momentum of climate-change planning within the United States Territories in the Pacific, surprisingly there was not an overall sense of urgency from the majority of respondents. Only time will tell if there is, indeed, built-in resilience afoot in the territories or if the future brings to the shores of American Samoa, Guam, and The Commonwealth of the Northern Mariana Islands the very type of events for which many of their sovereign neighbours are currently preparing.

References

Balsiger, J., & Debarbieux, B. (2011). Major challenges in regional environmental governance research and practice. *Procedia Social and Behavioral Sciences*, 14, 1-8. https://doi.org/10.1016/j.sbspro.2011.03.010

Becken, S. (2005). Harmonising climate change adaptation and mitigation: the case of tourist resorts in Fiji. *Global Environmental Change*, 15(4), 381-393. https://doi.org/10.1016/j.gloenvcha.2005.08.001

Bedford, R. (2008). *Migration policies, practices and cooperation mechanisms in the Pacific*. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific.

Bernard, H.R. (1988). *Research methods in cultural anthropology*. Lanham, MD: AltaMira.

Bernauer, T. (2002). Explaining success and failure in international river management. *Aquatic Sciences*, 64, 1-19. https://doi.org/10.1007/s00027-002-8050-4

Betzold, C. (2010). 'Borrowing' power to influence international negotiations: AOSIS in the climate change regime, 1990-1997. *Politics*, 30(3), 131-148. https://doi.org/10.1111/j.1467-9256.2010.01377.x

Biermann, F. (2004). Global environmental governance conceptualization and examples (Working Paper) (No. 12). Amsterdam: Global Governance Project.

Chasek, P.S., Downie, D.L., & Brown, J.W. (2010). *Global environmental politics*. Boulder: Westview.

Docherty, B., & Giannini, T. (2009). Confronting a rising tide: a proposal for a convention on climate change refugees. *Harvard Environmental Law Review*, 33, 1-62.

Grote, J. (2010). The changing tides of small island states discourse: a historical overview of the appearance of small island states in the international arena. *Verfassung Und Recht in Ubersee*, 43(3), 164-191. https://doi.org/10.5771/0506-7286-2010-2-164

Hawksley, C. (2009). *Australia's aid diplomacy and the Pacific islands: change and continuity in middle power foreign policy*. Oxford: Taylor & Francis.

Jacobs, R.E. (2005). Treading deep waters: substantive law issues in Tuvalu's threat to sue the United States in the International Court of Justice. *Pacific Rim Law & Policy Journal Association*, 24(52), 103-128.

Jarratt, D.G. (1996). A comparison of two alternative interviewing techniques used within an integrated research design: a case study in outshopping using semi-structured and non-directed interviewing techniques. *Journal of Marketing Practice: Applied Marketing Science*, 14(6), 6-15. https://doi.org/10.1108/02634509610131108

Julca, A., & Paddison, O. (2010). Vulnerabilities and migration in small island developing states in the context of climate change. *Natural Hazards,* 55(3), 717-728. https://doi.org/10.1007/s11069-009-9384-1

Kelman, I. (2014). No change from climate change: vulnerability and small island developing states. *The Geographical Journal,* 180(2), 120-129. https://doi.org/10.1111/geoj.12019

Lipschutz, R.D., & Conca, K. (1993). *The state and social power in global environmental politics*. New York: Columbia University Press.

Martin, S. (2010). Climate change, migration, and governance. *Global Governance*, 16(3), 397-414.

McAdam, J. (2010). 'Disappearing states', statelessness and the boundaries of international law. *University of New South Wales Law Research Paper* No. 2010-2.

McNamara, K.E., & Gibson, C. (2009). "We do not want to leave our land": Pacific ambassadors at the United Nations resist the category of 'climate refugees'. *Geoforum*, 40(3), 475-483. https://doi.org/10.1016/j.geoforum.2009.03.006

Mycoo, M.A., & Gobin, J.F. (2013). Coastal management, climate change adaptation and sustainability in small coastal communities: leatherback turtles and beach loss. *Sustainability Science*, 8(3), 441-453. https://doi.org/10.1007/s11625-013-0212-x

Ostrom, E. (1990). *Governing the commons: the evolution of institutions for collective action*. New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511807763

Page, E. (2008). Distributing the burdens of climate change. *Environmental Politics*, 17(4), 556-575. https://doi.org/10.1080/09644010802193419

Rabe, B. (2008). States on steroids: the intergovernmental odyssey of American climate policy. *Review of Policy Research* 25(2), 105-128. https://doi.org/10.1111/j.1541-1338.2007.00314.x

Robinson, S.-A. (2015). Climate change adaptation trends in small island developing states. *Mitigation and Adaptation Strategies for Global Change,* 22(4), 669-691. https://doi.org/10.1007/s11027-015-9693-5

Schofield, C. (2009). Shifting limits? Sea level rise and options to secure maritime jurisdictional claims. *Carbon and Climate Law Review*, *3*(4), 405-416. https://doi.org/10.21552/CCLR/2009/4/111

Schwebel, M. (2018a). Gathering at the AOSIS: Perceived cooperation amongst Pacific small island states. *Journal of International Environmental Agreements*, 18(2), 215-228. https://doi.org/10.1007/s10784-017-9379-4

Schwebel, M. (2018b). Measuring climate change adaptation in Pacific small island states: nissology and success. *Journal of Water and Climate Change*, 9(1), 112-123. https://doi.org/10.2166/wcc.2017.019

Selter, J. (2015) Testing the boundaries of subnational diplomacy: the international climate action of local and regional governments. *Transnational Environmental Law,* 4(2) 319-337. https://doi.org/10.1017/S2047102515000126

Taglioni, F. (2011). Insularity, political status and small insular spaces. *Shima*, 5(2), 45-67.

Tompkins, E.L., Nicholson-Cole, S. A., Hurlston, L.-A., Boyd, E., Hodge, G.B, Clarke, J., Gray, G., Trotz, N., & Varlack, L. (2005). *Surviving climate change in small islands: a guidebook*. Norwich: Tyndale Centre for Climate Change Research.

Ware, H. (2005). Demography, migration and conflict in the Pacific. *Journal of Peace Research*, 42(4), 435-454. https://doi.org/10.1177/0022343305054090

Weir, T., & Pittock, J. (2017). Human dimensions of environmental change in small island developing states: some common themes. *Regional Environmental Change,* 17(4), 949-958. https://doi.org/10.1007/s10113-017-1135-3

Islandness within climate change narratives of small island developing states (SIDS)

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ABSTRACT: Small island developing states (SIDS) are portrayed as icons of climate change impacts, with assumed islandness characteristics being used to emphasize vulnerability. Meanwhile, island resilience expressed as the stability of island 'paradises' is said to be undermined by climate change. Two dominant counternarratives have been emerging. Physical science demonstrates the limited empirical evidence at the moment for SIDS being destroyed due to climate change. Notwithstanding that such empirical evidence could appear in the future, social science counternarratives are challenging notions of SIDS' peoples inevitably fleeing their homes as climate refugees. Instead, SIDS' peoples have strong abilities and desires to make their own mobility decisions, whether due to climate change or other impetuses. Consequently, islandness within SIDS' climate change narratives is not necessarily problematic, but instead can help islanders address climate change and wider challenges. The counternarratives, even if not entirely contradicting the dominant narratives, provide needed nuances, balance, and contextualization to provide a full picture of SIDS, islandness, and climate change.

Keywords: climate change, migration, mobility, refugees, resilience, small island developing states (SIDS), vulnerability

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Introduction

Climate change narratives have long used islands, islanders, and island communities to demonstrate detrimental climate change impacts. These narratives promote assumed islandness icons, such as being small and low-lying, to emphasize vulnerability to climate change impacts. Island resilience expressed through the icon of geomorphological and societal stability is said to be undermined by climate change. 'Resilience thinking' espouses a normality in which shocks and adversity can be absorbed or overcome to continue island life as it, allegedly, has always been.

These dual narratives, of island vulnerability and island resilience to climate change because of islandness characteristics, impose numerous assumptions about islands and islandness which are rarely deconstructed or tested. This paper uses one category of islands iconized as being climate change victims, the small island developing states (SIDS), to describe and interrogate such assumptions, using counternarratives to provide more nuanced and balanced pictures of islandness within climate change narratives.

The next section discusses SIDS and climate change followed by discussion of SIDS' climate change narratives of vulnerability and resilience based on assumed islandness features. Then, two classes of counternarratives are detailed: physical science covering SIDS' geomorphology and social science covering SIDS' peoples' migration. The penultimate section analyzes islandness

and icons of it within SIDS' climate change narratives and counternarratives. The conclusions indicate that the narratives can lead to misleading policies and practices. The counternarratives provide needed nuances, balance, and contextualization to provide a full picture of SIDS and islandness for formulating and enacting successful responses to climate change.

Small island developing states (SIDS) and climate change

SIDS have been at the vanguard of raising climate change as a major topic of concern (Ashe et al., 1999; Betzold, 2010; Betzold et al., 2012). SIDS represent several dozen countries, primarily islands and archipelagos in the tropics and subtropics, which have joined together through perceived commonalities regarding development challenges and ways of overcoming those challenges, mainly in UN-related development contexts (Betzold, 2015; Fry, 2016). The SIDS group is rarely interrogated regarding its relevance to islandness, island studies, and island development.

The acronym 'SIDS' itself embodies assumed islandness icons of vulnerability and resilience which are not represented by all group members. Despite the first 'S' in SIDS standing for the stereotypical island moniker 'small', Papua New Guinea (PNG) is a SIDS although larger in area and population than New Zealand. The term 'island' does not apply to the SIDS of Belize, Guinea-Bissau, Guyana, and Suriname, except as language and cultural islands—but other countries in similar contexts such as Brazil and Equatorial Guinea are not SIDS. Similarly, 'developing' applies to many SIDS, especially those officially classified as Least Developed Countries, but Singapore is a SIDS and is considered to be developed. For the final 'S', several SIDS are not states because they are not fully sovereign, such as the New Zealand affiliates of Cook Islands and Niue.

SIDS use the islandness icons embedded in the acronym to represent their climate change interests. In November 1989, representatives from several island countries gathered in Maldives for the *Small States Conference on Sea Level Rise* (http://www.islandvulnerability.org/slr1989.html). *The Malé Declaration on Global Warming and Sea Level Rise* was produced from the conference, describing the mean global temperature increasing 1–2°C by 2030 and causing development challenges for small island states. The declaration called for richer countries to support other countries in dealing with climate change through training, technology, and funds (see also Lewis, 1990).

Following this conference, SIDS founded the Alliance of Small Island States (AOSIS; http://www.aosis.org) in 1990. AOSIS brings together SIDS governments to present an *ad hoc*, unified voice for lobbying and negotiating for SIDS interests, mainly on climate change within the UN system. AOSIS' strength is often seen with respect to agenda-setting for sustainable development including through ensuring that ocean-related interests remain prominent and that small countries' vulnerabilities are highlighted (Betzold, 2010; Betzold et al., 2012). The success of the lobbying by AOSIS and SIDS is debated. In the Paris Agreement addressing climate change (UNFCCC, 2015), AOSIS was highly influential in maintaining discussion on a target of a global mean temperature change of 1.5°C above pre-industrial levels, but the agreement ultimately settled on 2°C (Fry, 2016; UNFCCC, 2015).

SIDS remain at the forefront of islandness literature, policy, and practice regarding climate change. With respect to islandness, islands, and climate change, they have therefore created and perpetuated many of the key narratives, reinforcing islandness icons.

Narratives of SIDS' vulnerability and resilience to climate change

Many climate change narratives about SIDS adopt assumed islandness icons of vulnerability and resilience, yet fail to present a lucid understanding of climate change and its potential impacts on SIDS. Climate change has two official definitions from the United Nations (UN):

- The Intergovernmental Panel on Climate Change (IPCC) is a UN body tasked with synthesizing and assessing the member governments' views of the state of climate change science, with a mandate to provide a balance amongst perspectives. The IPCC (2013-2014, p. 5) defines 'climate change' to be "A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer."
- The United Nations Framework Convention on Climate Change (UNFCCC) is the UN policy body aiming for international action on climate change. UNFCCC (1992, Article 1, Paragraph 2) defines 'climate change' to be "A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

The main difference between these two definitions is that IPCC covers all shifts in the climate whilst UNFCCC focuses on shifts from anthropogenic causes. The principal similarity is that climate change is observed purely in the environment, through statistics about the climate which "in a narrow sense is usually defined as the average weather, or, more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years" (IPCC, 2013-2014, p. 5). Consequently, climate means average weather as described by parameters such as temperature, precipitation, and wind. With weather being based in the environment, climate change according to the IPCC and UNFCCC is an environmental phenomenon, though with anthropogenic influences.

Climate-related environmental phenomena can lead to adverse impacts on society including SIDS, such as casualties, infrastructure damage, and livelihood interruption. These adverse impacts are often termed a 'disaster' which is "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts" (UNISDR, 2017, online). With respect to weather and climate, a disaster by definition involves the environmental phenomenon—such as a drought, a flood, fog, hail, or a storm—as a 'hazard' which interacts with 'vulnerability', an entirely societal process in which people, communities, infrastructure, and institutions cannot experience the hazard without damage and disruption.

Vulnerability has long had numerous theories and interpretations, with SIDS frequently iconized in climate change venues as being particularly vulnerable to climate change impacts due to their island characteristics (e.g., Hall, 2012; IPCC, 2013-2014). Others drive deeper, deconstructing and critiquing the assumption that islandness icons unquestionably cause vulnerability by pointing out exceptions, balancing evidence, and how islandness overcomes vulnerability (Campbell, 2009; Lewis, 2009). With respect to disasters, case studies which would later be labelled as SIDS were foundational for understanding the long-term political processes which accrue and perpetuate vulnerability and resilience to disasters. Campbell (1984) and Gane (1975) covered Fiji; Hewitt (1983) included PNG; Lewis (1984) used Antigua; and O'Keefe & Conway (1977) focused on the Caribbean. This work solidified the view of vulnerability as the root cause of disasters through being a chronic and typical societal condition, built up by a combination of (i) internal community factors such as discrimination and prejudice, and (ii) external factors such as governance, resource distribution, and exploitation by outsiders (Hewitt, 1980, 1983; Lewis, 1999, 2009; Torry, 1979; Wisner et al., 2004).

These theories apply to vulnerability to all environmental phenomena, including weather hazards and their drivers, such as climate change by either UN definition, the El Niño Southern Oscillation (ENSO) cycle, and other variabilities including the North Atlantic

Oscillation. The term 'environmental hazard', though, has ambiguities. A drought can be due to societal water use rather than precipitation changes, potentially making a drought entirely caused by people and society (Glantz & Katz, 1977; Wilhite & Glantz, 1985). The term 'storm' as representing extreme parameters of precipitation and wind, and the term 'tropical cyclone' as representing an extreme storm, are both defined arbitrarily, such as through the Beaufort Scale or the Saffir Simpson Scale. The key to defining a disaster involving an environmental phenomenon remains people's and society's inability to deal with the environmental phenomenon due to vulnerability which can then make the environmental phenomenon seem to be a hazard.

The process through which people, communities, and institutions could deal with environmental phenomena is often termed 'resilience'. As with vulnerability, resilience has numerous threads in academia, leading to multiple meanings, contentions, and applications (Alexander, 2013), including for analyzing islandness (Campbell, 2009; Lewis, 2013). As with vulnerability, resilience is a political process involving rules and regulations, resource allocation, and individuals or collectives making decisions regarding infrastructure, planning, design, social norms, permissible behaviour, and other aspects of society (Gaillard, 2007, 2010; Lewis, 2013; Pugh, 2014; Sudmeier-Rieux, 2014). Examples are promulgating, monitoring, and enforcing building codes and planning regulations; regulating subsidies for infrastructure upgrades; permitting staff to work at home during adverse weather; and maintaining food, water, and energy supplies.

Despite earlier work providing wider island-related resilience perspectives for climate change (Lewis, 1990), much contemporary climate change work (IPCC, 2013-2014) uncritically adopts ecology's definition of resilience referring to stable systems absorbing external disturbances or rapidly returning to the pre-disturbance state (Begon et al., 2014). From an islandness perspective, it repeats the iconized trope of idyllic paradises where the people have long lived in stable harmony and hence were resilient, yet they are now threatened with destruction by the external forces of climate change to which they are vulnerable.

While no outcome is inevitable, SIDS' islands, communities, and peoples have vulnerabilities and resiliences to climate change, as do all places and populations. Climate change impacts on SIDS have the potential to significantly damage, possibly even destroy, communities and countries, irrespective of actions taken. Three main sources of possible devastation for SIDS are postulated:

1. Sea-level rise, with three causes: (i) slow melting of ice (glaciers, ice sheets, and permafrost) leading to centimetres of sea-level rise over years; (ii) thermal expansion of water bodies leading to metres of sea-level rise over decades; and (iii) non-negligible probabilities of ice sheet collapse (Greenland and Antarctica), possibly leading to tens of metres of sea-level rise most likely over centuries. Sea-level rise could possibly submerge islands or cause them to erode.
2. Ocean acidification occurs when oceans absorb carbon dioxide from the atmosphere. The gas combines with water to form carbonic acid which lowers the ocean's pH. Ocean acidification could exacerbate shingle beach erosion and, coupled with elevated sea-surface temperatures, could lead to major coral mortality through bleaching. Without a protective reef, many SIDS' islands would be exposed to the full power of oceanic waves, storms, and currents.
3. As the weather and oceans change, so will ecosystems, affecting local food and water supplies. Groundwater supplies could be contaminated from saltwater intrusion. These changes will impact human and environmental health across SIDS.

These climate change impacts are not SIDS-specific or, indeed, island-specific. For instance, coastline changes such as erosion and accretion are relevant around the world while ecosystem changes are seen on mountains and in landlocked forests. Highlighting and examining climate change impacts in SIDS contexts, rather than selecting a specific impact

and analyzing it globally, is important for gleaning insights into the intersection of climate change impacts and narratives with islandness.

As a prominent example in the public consciousness, the media have picked up the idea of climate change destroying SIDS communities leading to forced movement. Some media have constructed a narrative of doom (see analyses by Farbotko, 2005, 2010), continually referring to different case studies, many of which are from SIDS, as the world's first 'climate refugees' or 'climate change refugees' (Table 1). They fail to note that there could be only a single 'first'. Table 1 is not comprehensive, but is merely illustrative of what is frequently reported, with the selection representing different geographical regions and different points along the political spectrum while aiming to avoid tabloid-type sensationalist or purely ideological media. The examples in the table are not necessarily examples of actual climate change migration or climate change refugees. They are selected to list stories which report this alleged phenomenon, whether or not it is the case, indicating how a 'first' label can become the importance of the story provided, irrespective of how many 'firsts' there have been.

Table 1: Illustrative examples of media references to the world's first climate (change) refugees (which are not necessarily examples of actual climate change migration).

Date	News source	Location of first climate (change) refugees	Website
30 July 2004	BBC	Shishmaref, Alaska	http://news.bbc.co.uk/1/hi/world/europe/3940399.stm
6 December 2005	UNEP	Tegua, Vanuatu	Quoted by Ballu et al. (2011), with the original press release preserved at: http://web.archive.org/web/20140921180800/http://grida.no/news/press/1533.aspx
7 December 2009	*The Telegraph*	Carteret Islands, PNG	http://www.telegraph.co.uk/news/earth/carteret-islands/6752962/The-worlds-first-climate-change-refugees.html
7 August 2014	*Smithsonian Magazine*	A Tuvaluan family in New Zealand	http://www.smithsonianmag.com/smart-news/worlds-first-climate-change-refugees-were-just-granted-residency-new-zealand-180952279
10 September 2014	*The Guardian*	Bangladesh	https://www.theguardian.com/environment/climate-consensus-97-per-cent/2014/sep/10/in-the-years-of-living-dangerously-part-3
21 November 2015	*South China Morning Post*	A family from Kiribati deported from New Zealand	http://www.scmp.com/magazines/post-magazine/article/1880135/ready-bail-kiribati-struggles-keep-its-population-afloat

Such media stories and constructs are often reinforced by academic works perpetuating myths of ruined atolls producing climate (change) refugees. Adger & Barnett (2005) and Pilkey & Young (2009) stated that New Zealand has a special immigrant category to help settle Pacific islanders who are fleeing from climate change impacts. No official

documentation of New Zealand's Pacific Access Category could be found linking it to climate or environmental change. Duong (2009) frames Tuvalu under climate change as a drowning paradise from which the tearful islanders are forced to move. Halstead (2016, p. 819) describes SIDS as "sinking islands: early victims of climate change…forced [to] abandon their homelands, which are no longer livable."

Consequently, an academic and media narrative develops of SIDS' peoples as vulnerable to climate change because their islands and communities will be devastated. According to this narrative, they have been resilient due to their isolation and stability in their island communities, which is now being undermined by climate change.

Counternarratives

Not all available evidence currently supports island doom scenarios. Two dominant counternarratives exist: physical science regarding SIDS' geomorphology and social science regarding SIDS' peoples' migration.

SIDS' geomorphology

The counternarrative based on physical science emerges from recent studies demonstrating limited empirical evidence at the moment for island communities being destroyed under climate change impacts. Table 2 lists illustrative examples of empirical studies of low-lying SIDS' islands changing under measurable sea-level rise which were found through a literature search of peer-reviewed scientific papers covering SIDS island geomorphological changes and measurable sea-level rise. Pacific SIDS have so far tended to be studied more than other locations for this topic, leading to Table 2's Pacific focus. Some islands are eroding (but not always due to climate change; see also Woodroffe, 2008), some are accreting, some are changing longitudinally, and some are seemingly unaffected. Table 2's patterns are corroborated elsewhere, such as for an island in southwestern Bangladesh where worsening flooding from the ocean was attributed more to anthropogenic deforestation and embankments than to sea-level changes (Auerbach et al., 2015). The studies tend to highlight areal changes without always fully detailing volumetric changes.

Within the geomorphological changes, coral reefs can have resilience. Perry et al. (2015) postulate that coral growth under some scenarios could keep up with sea-level rise and ecosystem changes. Corals' ability to flourish under rapid sea-level changes was demonstrated empirically in the Solomon Islands by Saunders et al. (2016). They used satellite imagery from before and after a 2007 earthquake which caused subsidence, combined with *in situ* observations in 2013, to show that the coral reefs remained vibrant despite the sudden, relative sea-level rise. Transferability of the results to other situations is unclear because corals vary in health and ecosystem characteristics and because tectonic subsidence is different from climate change–induced sea-level rise combined with other climate change impacts.

Local societal action, rather than climate change, has long been responsible for many difficulties seen today related to "disappearing SIDS' and 'dying corals'. Examples are coral mining in Maldives (Brown & Dunne, 1988), sand mining in Kiribati (Duvat, 2013), and tourism development in coastal Barbados (Mycoo, 2014). Crosby et al. (2002, p. 124) document how anthropogenic damage to reefs in Pacific SIDS—through capturing species whose hunting is outlawed alongside "destructive fishing practices such as the use of dynamite, poisons, and illegal gear"—leads to significant erosion. For Fongafale Islet, Tuvalu, post-independence land reclamation in flooding swamps led to settlements which are now seen to be vulnerable to sea-level rise impacts (Yamano et al., 2007).

Consequently, the resilience narrative of islands (as ecosystems and as geomorphological systems) being stable and thus resistant to physical changes is not supported by the evidence (see also DeLoughrey, 2013). Both environmental and societal changes ensure that SIDS

remain in flux physically. As Dickinson (1999, 2009) details, most Pacific atolls emerged from the sea and became stable enough to permit long-term settlement only from the mid-Holocene, after sea level started to drop from up to two metres above its present value. Once those atolls were established and settled, the islanders often sought to artificially stabilize the islands, against the natural tendency to fluctuate in area, volume, and shape.

Table 2: Illustrative examples of changing geomorphology of SIDS' islands from the peer-reviewed literature

Reference	SIDS locations studied	Results
Albert et al. (2016)	33 reef islands of the Solomon Islands	Island responses range from entire disappearance to minor accretion.
Ballu et al. (2011)	Torres Islands, Vanuatu	Tectonic subsidence is dominating sea-level rise as the reason for ocean encroachment.
Biribo & Woodroffe (2013)	Reef islands of Tarawa Atoll, Kiribati	Significant erosion and accretion are observed, but mainly due to local societal activities.
Ford (2012)	Majuro, Marshall Islands	Sea-level rise is measurable, but atoll changes are mainly from local societal activities. Where societal activities are less noticeable, some shorelines are eroding and some are accreting.
Ford & Kench (2015)	Eight islands of the Marshall Islands	Sea-level rise is measurable, but all the islands show net accretion.
Kench et al. (2015)	29 islands of Funafuti Atoll, Tuvalu	Sea-level rise is measurable, with island responses ranging from severe erosion to significant land gain.
Mann et al. (2016)	Takú Atoll, Papua New Guinea	Sea-level rise is measurable, but is not dominating natural shoreline dynamics.
McLean & Kench (2015)	Over 200 Pacific islands	Despite measurable sea-level rise, little evidence exists of island sizes being reduced, with both local societal activities and wider environmental cycles dominating sea-level rise.
Rankey (2011)	17 atolls across Kiribati	Increased rates of change for both erosion and accretion.
Webb & Kench (2010)	27 atoll islands across the Federated States of Micronesia, Kiribati, and Tuvalu	Sea-level rise is measurable, but the islands showed a mixture of erosion, accretion, and stability, with only a few islands losing area overall.
Yates et al. (2013)	47 atolls of Manihi and Manuae, French Polynesia	Despite measurable sea-level rise, most island areas are expanding or remaining stable, although major localized changes are seen. Two atolls showed local societal activities influencing the changes.

SIDS' peoples' migration

Social science counternarratives challenging notions of climate change refugees demonstrate that little empirical or policy evidence exists at the moment for this form of migration (Bettini, 2013; Hartmann, 2010; Nicholson, 2014), including from SIDS. Rather than the islandness icons and stereotypes of SIDS' peoples being passive while living in their stable paradises until forced out by climate change, the social science counternarrative details that SIDS peoples have strong knowledge, wisdom, and abilities for dealing with significant social and environmental changes as part of typical island life (Gaillard, 2007; Lewis, 1999; Méheux et al., 2007).

Within typical island life, SIDS' peoples accept population mobility as part of islandness (DeLoughrey, 2007; Hau'ofa, 2008; Nixon and King, 2013). They also accept that, contemporarily, they might need to resettle and rebuild communities due to climate change's impacts (McNamara, 2009; McNamara & Gibson, 2009). They reject the notion of fleeing as climate refugees (McNamara & Gibson, 2009), instead aiming to control the process of moving, to make decisions in their own ways on their own terms, and to request outside assistance to support these processes when they need it, such as land to move to along with resources to support any move. As one example, Kiribati developed a "migration with dignity" policy (Wyett, 2014) to effect population movement on the country's own terms.

In fact, many SIDS peoples have lived for centuries or millennia through social and environmental changes, although many communities were destroyed by such changes. Consequently, analogies from history inform decision-making in the present (Glantz, 1988) so that successes could be emulated and failures avoided. Around the South Pacific during the 14th century, major sea level and climatic shifts led many island communities to move or to disappear (Nunn, 2003; Nunn et al., 2007). Many volcanic eruptions have led SIDS communities to evacuate from their islands without a guarantee of return. Examples are Niuafo'ou, Tonga, in 1946 (Lewis, 1979) and Manam Island, PNG, in 1957 (Taylor, 1963) and 2004 (Mercer & Kelman, 2010). Drawing on histories and experiences of major changes leading to SIDS' peoples' migration can assist in better addressing options for island futures under climate change.

Other experiences exist of SIDS communities becoming virtually uninhabitable. Nauru had extensive phosphate reserves which were depleted soon after 2000 (Connell, 2006). Through a combination of domestic mistakes and external exploitation (Weeramantry, 1992), revenues were squandered without alternative livelihoods being developed, leaving the country depending on external aid. Discussions about relocating the people to Australia reignited a forced migration plan proposed several decades before, which the Nauruans opposed (McAdam, 2017). Similarly, Banabans tried but failed to oppose forcible relocation from their equatorial Pacific island, now governed by Kiribati, due to phosphate mining and the Japanese occupation during the Second World War (Tabucanon, 2012). The analogues with climate change are evident: islands become almost uninhabitable from internal and external factors, with migration being an option, but islanders wish to control mobility decisions and their own fates.

No SIDS' environment or culture has been stable or static, whether due to climatic changes, volcanic eruptions, mining, fishing, planting, or artificial shoreline modification. Migration of SIDS' peoples' continues for family, health, education, livelihoods, adventure, an urban lifestyle, and the opportunity to send remittances (Hau'ofa, 2008; King, 2009; Nixon, 2008).

Consequently, the narrative of climate change refugees fleeing their SIDS' homes is challenged by the social science counternarrative of the islandness characteristic of SIDS' peoples as migrants, as they have always been. Only a handful of SIDS have current communities which are older than a few millennia; for example, few indigenous groups remain on Caribbean SIDS while Dickinson (2009) describes timelines of Pacific settlement. Once SIDS communities and cultures were established, they retained in-migration, outmigration, and circular migration as a vital part of their society (Bellwood, 2013). Considering how many Pacific and Indian Ocean islands within or near contemporary SIDS were not inhabited when Europeans started exploring, although some like Henderson Island in the Pitcairn group had been settled earlier (Weisler, 1994), plenty of territory remained for indigenous peoples to migrate to, if they had had the time to continue exploring. The flows of people supported trade, adventure, genetic diversity, and livelihoods, with outmigration assisting in keeping communities the right size for the resources available rather than wrecking their environment through overconsumption.

This migration history of SIDS' peoples and the frequent desire to move—such as the Pacific Access Category mentioned earlier—does not justify forced migration, whether due to climate change, nuclear testing, mineral exploitation, or military base construction, all of which have occurred for SIDS (e.g., DeLoughrey, 2007, 2013). It counters the narratives that SIDS' peoples would be resilient only by maintaining the status quo in their current homes and that they have lived in stable communities until climate change manifested. Instead, migration has long been part of SIDS' peoples' resilience in dealing with social and environmental changes which originate both internally and externally.

Balancing islandness and icons of it within SIDS' climate change narratives

In the previous section, the counternarratives did not necessarily refute the narratives entirely, instead balancing, contextualizing, and nuancing them, providing subtleties and provisos. The counternarratives also show how it would be counterproductive to idealize SIDS' capabilities to deal with climate change and to assume that SIDS' resiliences will permit them to deal with climate change easily. Yet idealization and iconization often occurs. Emerging from the previous discussion, SIDS' islandness icons with respect to climate change fall into three main categories:

1. Low-lying and thus vulnerable to climate change.
2. Small and thus assumed to have few resources and to require help, leading to vulnerability to climate change.
3. Stable physically and socially, which confers resilience to climate change.

All three have been critiqued with respect to islandness (Baldacchino, 2004, 2007, 2008; Campbell, 2009; Grydehøj & Hayward, 2011; Lewis, 2009; Selwyn, 1980; Shaw, 1982) and are now explored further with respect to climate change.

Iconizing SIDS as low-lying does not express the full variety of communities. SIDS such as Comoros and St. Vincent are mountainous with active volcanoes, as is PNG with its highest point more than 4.5 kilometres above sea level. A series of coral terraces, some rising steeply from the shoreline, forms Barbados. Nevertheless, irrespective of elevation changes, significant SIDS' infrastructure sits close to sea level and so is potentially threatened by sea-level rise and other coastal impacts of climate change. Much important infrastructure of the capital cities Castries, St. Lucia, and Victoria, Seychelles, amongst others, is coastal and close to sea level despite the cities' islands being mountainous. Many key roads on Jamaica's and Fiji's main islands are coastal and experience erosion-related damage.

Yet a few SIDS, including Tuvalu and Maldives, comprise only low-lying atolls. Others such as Kiribati are often said to rise barely above sea level, but have both coral atolls and mountains. For example, Wyett (2014, p. 171) refers to Kiribati as "low-lying" and "likely to be among the first victims of such a disaster" of "the inundation of an entire nation due to anthropogenic climate change," yet the country's highest point is 81 metres above sea level. Nonetheless, the majority of the country's population and infrastructure sits within two metres of sea level and it would not be feasible for everyone to settle on the country's highest parts. Similarly, most Tongan settlements are low-lying even though Tonga's highest point is a volcano rising more than one kilometre above sea-level. The entire country is not likely to disappear due to climate change, even under extreme sea-level rise scenarios, but it might be difficult for the country, even under moderate sea-level rise scenarios. Despite this diversity of SIDS landscapes, the islandness characteristic 'low-lying' is used to imply that SIDS' peoples and countries will drown, sink, disappear, or be submerged (see critiques by Dawson & Hayward, 2016).

Another islandness icon presumed to create vulnerability to climate change is smallness in land area and population, generating expectations of limited resources and limited abilities. Many SIDS, including Seychelles and Marshall Islands, have populations in the tens of

thousands, so technical specialists are not always available to cover the wide range of topics affected by climate change. SIDS' governments therefore pool resources to create regional agencies supporting all member countries by employing the best specialists from around the SIDS and from other countries.

For climate change, the two main examples are the Caribbean Community Climate Change Centre in Belize and the Secretariat of the Pacific Regional Environment Programme in Samoa. Pooling resources and responsibilities is one example where SIDS have not been inhibited by their small populations, instead implementing their own approach to serve their own needs and to take advantage of their smallness. Smallness narratives mask other abilities which SIDS' peoples have long used to thrive in their homes during social and environmental changes, such as tapping into the vast resources of the ocean (Hau'ofa, 2008) so that small land areas do not limit livelihoods.

Consequently, the islandness characteristic of smallness is assumed to create climate change-related vulnerabilities for SIDS, but the evidence suggests that smallness-related vulnerability to climate change can be overcome. Resilience can be born of smallness as well. Smallness can be a vulnerability if it is made to be so, but smallness can be made an advantage.

The third islandness icon category in climate change narratives is physical and social stability, implied to create resilience through an idyllic existence in island paradises that are being ruined by climate change. Conversely, as detailed in the previous section, societal change through population mobility has helped to maintain many SIDS' societies and communities (e.g., McCall & Connell, 1993). Whereas island studies and other fields discuss 'migration' and 'mobilities' (e.g., Randall et al., 2014), climate change literature has tended towards more alarming vocabulary such as 'evacuation', 'fleeing', 'abandonment', and 'displacement', presuming forced migration. The wording is accurate sometimes, but it has long been known that population movements happen along a continuum of forced and voluntary migration, combining elements of both (Hugo, 1996). A balance is needed, examining each context.

For example, people from the Carteret Islands, PNG, are seemingly moving due to presumed climate change impacts or perceptions thereof (Connell, 2016; Yamamoto & Esteban, 2014), a decision that might yet loom for numerous other SIDS communities. Or they might be moving because resources are not being provided to permit them to deal with climate change while staying in their homes. In such cases, how much of the forced migration is a choice by outsiders not to help? Does such migration exemplify climate change adaptation or a failure to provide support to adapt (Stojanov, 2014)?

SIDS' peoples' migration and mobilities have long occurred for many reasons, including climate-related changes. Population movement is an islandness trait, supporting the peoples' survival, thriving, and resilience. Contemporary climate change will not alter this characteristic, but adds another factor into the gamut of reasons for SIDS' peoples choosing and being forced to move. Migration from SIDS should not be idealised, since it contributes to removing skills and abilities from the populations, as demonstrated for Cape Verde (Atchoaréna et al., 2008). SIDS' societal fluxes bring vulnerabilities and resiliences, as do SIDS' ever-morphing landscapes (see also Table 2).

Even lack of erosion does not preclude migration forced by geomorphological alterations linked to climate change. In 1972, Tuvalu experienced a cyclone that built a coral rubble wall larger than some of the country's smaller islands (Baines & McLean, 1976; Maragos et al., 1973). Although land expanded, such a scale of change occurring periodically could make living on the island difficult, if not impossible. Yet this is part of SIDS' typical geomorphological instability, even if modified by climate change.

Moreover, even though little empirical evidence exists at the moment for islands disappearing due to climate change, such empirical evidence might appear in the future. In particular, some evidence of islands accreting or remaining stable under measurable sea-level

rise is due to local societal activities, including reclamation—the large scale of which Grydehøj (2015) details for the SIDS of Bahrain. This evidence demonstrates the feasibility of action to prevent island disappearance (see also the proposals in Gerrard & Wannier, 2013 and Yamamoto & Esteban, 2014) as is being attempted in Maldives (Sovacool, 2012).

Furthermore, observations of sea-level rise to date have measured principally ice melt, with thermal expansion manifesting over coming decades and ice sheet collapse always remaining a possibility. Sufficient island geomorphological changes for remaining above sea level in ice sheet collapse scenarios might not be feasible (Hardy & Nuse, 2016). Sea-level rise accelerated markedly from 1993 to 2014 (Chen et al., 2017), so island geomorphology might respond differently to higher and faster sea-level rise. The islandness icons and assumptions within SIDS' climate change narratives are not necessarily obviated by the counternarratives, but they are balanced, nuanced, and contextualized.

Table 3: Summary of islandness within SIDS' climate change narratives and counternarratives.

Narratives	Islandness icons	Counternarratives
Climate change physically dooms SIDS through island disappearance.	SIDS are low-lying and small, leading to physical vulnerability to climate change.	Scenarios exist in which physical destruction occurs, but the limited empirical evidence so far does not support this outcome. SIDS are not entirely small or low-lying.
Climate change socially dooms SIDS through forced migration.	SIDS are low-lying and small, leading to social vulnerability to climate change due to few human resources and few abilities to deal with challenges.	Scenarios exist in which forced migration occurs, and some is now occurring due to climate change only, but the theoretical analysis and limited empirical evidence available so far does not support this outcome as being widespread or common. Even for the few communities moving only due to climate change, options exist to remain, but resources are not being made available for these options. Additionally, some of those moving or considering moving do not wish to be labelled as helpless victims, instead seeking to control their own fates. All peoples and places, including SIDS, have vulnerabilities to climate change, but they also have resiliences for dealing with climate change.
Climate change undermines the idyllic status quo for SIDS' islands, peoples, and life.	SIDS are geomorphologically and societally stable which creates resilience.	SIDS' environments and peoples have always undergone various forms of change including erosion and migration, sometimes thriving and sometimes experiencing disaster.
SIDS' peoples are desperate for the outside world to assist them in avoiding climate change-related doom.	SIDS are small which creates vulnerability while reducing abilities to deal with climate change.	SIDS seek external support for making and enacting their own climate change- related decisions. Requesting and deserving assistance does not mean lack of domestic interest or abilities.

Conclusions

As with everyone, SIDS' peoples have vulnerabilities and resiliences to climate change. Climate change narratives about SIDS emerge based on assumptions and icons about islandness, such as islandness creating vulnerabilities to climate change. These narratives can be damaging to SIDS' efforts to maintain viable countries, cultures, and livelihoods. They are also are challenged by counternarratives (Table 3).

Exploring counternarratives does not indicate that all the narratives are entirely incorrect, but does nuance, balance, and contextualize them, explaining how the islandness characteristics which can create vulnerability to climate change can also support SIDS' resilience to climate change. SIDS should embrace their characteristics and use them for tackling climate change, rather than being discouraged by their own traits. Adopting the narratives and icons wholeheartedly could lead to misplaced policies and practices for dealing with climate change. They distract from the full range of options available, becoming a self-serving structure to support external climate change research, policy, and practice rather than to support SIDS.

Yet, SIDS' concerns about climate change and subsequent decision-making should never be dismissed. Highlighting the counternarratives and exposing iconization does not diminish the climate change challenges facing SIDS.

Misleading narratives dominating science, policy, and practice agendas can be constructively overcome by adopting and promoting the counternarratives for action on climate change within wider development contexts, especially noting that nothing in these counternarratives is new, since many islanders from and outside of SIDS espouse the core points for contexts much wider than climate change (Baldacchino, 2007; Grydehøj, 2011; Hau'ofa, 2008; Nixon, 2008; Nixon and King, 2013; Weeramantry, 1992). Islandness within climate change narratives of SIDS is neither helpful nor harmful in and of itself; its impact depends on how it is applied, used, abused, and misused, which is a choice by those employing the narratives—including scientists and SIDS peoples. SIDS deserve the world's support to deal with climate change concerns on their own terms, without exaggerating the situation or neglecting science and history.

References

Adger, W.N., & Barnett, J. (2005). Compensation for climate change must meet needs. *Nature*, 436(7049), 328. https://doi.org/10.1038/436328c

Albert, S., Leon, J.X., Grinham, A.R., Church, J.A., Gibbes, B.R., & Woodroffe, C.D. (2016). Interactions between sea-level rise and wave exposure on reef island dynamics in the Solomon Islands. *Environmental Research Letters*, 11(5), paper 054011. https://doi.org/10.1088/1748-9326/11/5/054011

Alexander, D.E. (2013). Resilience and disaster risk reduction: an etymological journey. *Natural Hazards and Earth Systems Sciences*, 13(11), 2707-2716. https://doi.org/10.5194/nhess-13-2707-2013

Ashe, J.W., Van Lierop, R., & Cherian, A. (1999). The role of the Alliance of Small Island States (AOSIS) in the negotiation of the United Nations Framework Convention on Climate Change (UNFCCC). *Natural Resources Forum*, 23(3), 209-220. https://doi.org/10.1111/j.1477-8947.1999.tb00910.x

Atchoaréna, D. Dias Da Graça, P., & Marquez, J.M. (2008). Strategies for post-primary education in small island developing states (SIDS): Lessons from Cape Verde. *Comparative Education*, 44(2), 167-185. https://doi.org/10.1080/03050060802041076

Auerbach, L.W., Goodbred Jr., S.L., Mondal, D. R., Wilson, C.A., Ahmed, K.R., Roy, K., Steckler, M.S., Small, C., Gilligan, J.M., & Ackerly, B.A. (2015). Flood risk of natural

and embanked landscapes on the Ganges–Brahmaputra tidal delta plain. *Nature Climate Change*, 5(2), 153-157. https://doi.org/10.1038/nclimate2472

Baines, G.B.K., & McLean, R.F. (1976). Re-surveys of 1972 hurricane rampart of Funafuti Atoll, Ellice Islands. *Search*, 7(1-2), 36-37.

Baldacchino G. (2008). Studying islands: on whose terms? Some epistemological and methodological challenges to the pursuit of island studies. *Island Studies Journal*, 3(1), 37-56.

Baldacchino, G (ed.) (2007). *A world of islands: an island studies reader*. Charlottetown & Luqa: Institute of Island Studies, University of Prince Edward Island & Agenda Academic.

Baldacchino, G. (2004). The coming of age of island studies. *Tijdschrift voor economische en sociale geografie*, 95(3), 272-283. https://doi.org/10.1111/j.1467-9663.2004.00307.x

Ballu, V., Bouin, M.N., Siméoni, P., Crawford, W.C., Calmant, S., Boré, J.M., Kanas, T., & Pelletier, B. (2011). Comparing the role of absolute sea-level rise and vertical tectonic motions in coastal flooding, Torres Islands (Vanuatu). PNAS, *Proceedings of the National Academy of Sciences*, 108(32), 13019-13022. https://doi.org/10.1073/pnas.1102842108

Begon, M., Howarth, R.W., & Townsend, C.R. (2014). Essentials of ecology, 4th ed. Chichester: Wiley.

Bellwood, P. (2013). *First migrants: ancient migration in global perspective*. Chichester: Wiley Blackwell.

Bettini, G. (2013). Climate barbarians at the gate? A critique of apocalyptic narratives on 'climate refugees'. *Geoforum*, 45, 63-72. https://doi.org/10.1016/j.geoforum.2012.09.009

Betzold, C. (2015). Adapting to climate change in small island developing states. *Climatic Change*, 133(3), 481-489. https://doi.org/10.1007/s10584-015-1408-0

Betzold, C. (2010). 'Borrowing' power to influence international negotiations: AOSIS in the climate change regime, 1990-1997. *Politics*, 30(3), 131-148. https://doi.org/10.1111/j.1467-9256.2010.01377.x

Betzold, C., Castro, P., & Weiler, F. (2012). AOSIS in the UNFCCC negotiations: from unity to fragmentation? *Climate Policy*, 12(5), 131-148. https://doi.org/10.1080/14693062.2012.692205

Biribo, N., & Woodroffe, C.D. (2013). Historical area and shoreline change of reef islands around Tarawa Atoll, Kiribati. *Sustainability Science*, 8(3), 345-362. https://doi.org/10.1007/s11625-013-0210-z

Brown, B.E., & Dunne, R.P. (1988). The environmental impact of coral mining on coral reefs in the Maldives. *Environmental Conservation*, 15(2), 159-165. https://doi.org/10.1017/S0376892900028976

Campbell, J. (1984). Dealing with disaster: hurricane response in Fiji. Honolulu: East-West Center.

Campbell, J. (2009). Islandness: vulnerability and resilience in Oceania. *Shima*, 3(1), 85-97.

Chen, X., Zhang, X., Church, J.A., Watson, C.S., King, M.A., Monselesan, D., Legresy, B., & Harig, C. (2017). The increasing rate of global mean sea-level rise during 1993–2014. *Nature Climate Change*, 7, 492-495. https://doi.org/10.1038/nclimate3325

Connell, J. (2016). Last days in the Carteret Islands? Climate change, livelihoods and migration on coral atolls. *Asia Pacific Viewpoint,* 5(1), 3-15. https://doi.org/10.1111/apv.12118

Connell, J. (2006). Nauru: the first failed Pacific state? *The Round Table*, 95(383), 47-63. https://doi.org/10.1080/00358530500379205

Crosby, M.P., Brighouse, G., & Pichon, M. (2002). Priorities and strategies for addressing natural and anthropogenic threats to coral reefs in Pacific Island Nations. *Ocean & Coastal Management*, 45(2-3), 121-137. https://doi.org/10.1016/S0964-5691(02)00051-0

Dawson, H., & Hayward, P. (2016). Introduction – Submergence: a special issue on Atlantis and related mythologies. *Shima*, 10(2), 1-9. https://doi.org/10.21463/shima.10.2.03
DeLoughrey, E.M. (2013). The myth of isolates: ecosystem ecologies in the nuclear Pacific. *Cultural Geographies*, 20(2), 167-184. https://doi.org/10.1177/1474474012463664
DeLoughrey, E.M. (2007). *Routes and roots: navigating Caribbean and Pacific island literatures*. Honolulu: University of Hawai'i Press.
Dickinson, W.R. (2009). Pacific atoll living: how long already and until when? *GSA Today*, 19(3), 4-10. https://doi.org/10.1130/GSATG35A.1
Dickinson, W.R. (1999). Holocene sea-level record on Funafuti and potential impact of global warming on Central Pacific atolls. *Quaternary Research*, 51(2), 124-132. https://doi.org/10.1006/qres.1998.2029
Duong, T.T.V. (2009). When islands drown: the plight of climate change refugees and recourse to international human rights law. *Journal of International Law - University of Pennsylvania Law School*, 31(4), 1239-1266.
Duvat, V. (2013). Coastal protection structures in Tarawa Atoll, Republic of Kiribati. *Sustainability Science*, 8(3), 363-379. https://doi.org/10.1007/s11625-013-0205-9
Farbotko, C. (2010). Wishful sinking: disappearing islands, climate refugees and cosmopolitan experimentation. *Asia Pacific Viewpoint*, 51(1), 47-60. https://doi.org/10.1111/j.1467-8373.2010.001413.x
Farbotko, C. (2005). Tuvalu and climate change: constructions of environmental displacement in the Sydney Morning Herald. *Geografiska Annaler – Series B: Human Geography*, 87(4), 279-293. https://doi.org/10.1111/j.0435-3684.2005.00199.x
Ford, M. (2012). Shoreline changes on an urban atoll in the Central Pacific Ocean: Majuro Atoll, Marshall Islands. *Journal of Coastal Research*, 28(1), 11-22. https://doi.org/10.2112/JCOASTRES-D-11-00008.1
Ford, M., & Kench, P.S. (2015). Multi-decadal shoreline changes in response to sea level rise in the Marshall Islands. *Anthropocene*, 11, 14-24. https://doi.org/10.1016/j.ancene.2015.11.002
Fry, I. (2016). The Paris Agreement: an insider's perspective – the role of Small Island Developing States. *Environmental Policy and Law*, 46(2), 105-108.
Gaillard, J.C. (2010). Vulnerability, capacity and resilience: perspectives for climate and development policy. *Journal of International Development*, 22(2), 218-232. https://doi.org/10.1002/jid.1675
Gaillard, J.C. (2007). Resilience of traditional societies in facing natural hazards. *Disaster Prevention and Management*, 16(4), 522-544. https://doi.org/10.1108/09653560710817011
Gane, M. (1975). Report of a mission to assess the hurricane factor for planning purposes in Fiji. *Bradford Disaster Research Unit Occasional Paper 9*. Bradford: University of Bradford.
Gerrard, M.B., & Wannier, G.E. (eds.) (2013). *Threatened island nations: legal implications of rising seas and a changing climate*. Cambridge: Cambridge University Press.
Glantz, M.H. (Ed.) (1988). *Societal responses to regional climatic change: forecasting by Analogy*. Boulder: Westview.
Glantz, M.H., & Katz, R.W. (1977). When is a drought a drought? *Nature*, 267, 192-193. https://doi.org/10.1038/267192a0
Grydehøj, A. (2015). Making ground, losing space: land reclamation and urban public space in island cities. *Urban Island Studies*, 1, 96-117. https://doi.org/10.20958/uis.2015.6
Grydehøj, A. (2011). Making the most of smallness: economic policy in microstates and sub-national island jurisdictions. *Space and Polity*, 15(3), 183-196. https://doi.org/10.1080/13562576.2011.692578
Grydehøj, A., & Hayward, P. (2011). Autonomy initiatives and quintessential Englishness on the Isle of Wight. *Island Studies Journal*, 6(2), 179-202.

Hall, C.M. (2012). Island, islandness, vulnerability and resilience. *Tourism Recreation Research*, 37(2), 177-181. https://doi.org/10.1080/02508281.2012.11081703

Halstead, E. (2016). Citizens of sinking islands: early victims of climate change. *Indiana Journal of Global Legal Studies*, 23(2), 819-837. https://doi.org/10.2979/indjglolegstu.23.2.0819

Hardy, R.D., & Nuse, B.L. (2016). Global sea-level rise: weighing country responsibility and risk. *Climatic Change*, 137(3), 333-345. https://doi.org/10.1007/s10584-016-1703-4

Hartmann, B. (2010). Rethinking climate refugees and climate conflict: rhetoric, reality and the politics of policy discourse. *Journal of International Development*, 22(2), 233-246. https://doi.org/10.1002/jid.1676

Hau'ofa, E. (2008). *We are the ocean*. Honolulu: University of Hawai'i Press.

Hewitt, K. (Ed.) (1983). Interpretations of calamity from the viewpoint of human ecology. Boston: Allen & Unwin.

Hewitt, K. (1980). Review of the Environment as Hazard, by Burton, I, Kates, R. & White, G. (1978). *Annals of the Association of American Geographers*, 70(2), 306-311.

Hugo, G. (1996). Environmental concerns and international migration. *The International Migration Review*, 30(1), 105-131. https://doi.org/10.2307/2547462

IPCC (2013-2014). *Fifth assessment report*. Geneva: IPCC (Intergovernmental Panel on Climate Change).

Kench, P.S., Thompson, D., Ford, M.R., Ogawa, H., & McLean, R.F. (2015). Coral islands defy sea-level rise over the past century: records from a central Pacific atoll. *Geology*, 43(6), 515-518. https://doi.org/10.1130/G36555.1

King, R. (2009). Geography, islands and migration in an era of global mobility. *Island Studies Journal*, 4(1), 53-84.

Lewis, J. (2013). Some realities of resilience: an updated case study of storms and flooding at Chiswell, Dorset. *Disaster Prevention and Management*, 22(4), 300-311. https://doi.org/10.1108/DPM-03-2013-0053

Lewis, J. (2009). An island characteristic: derivative vulnerabilities to indigenous and exogenous hazards. *Shima*, 3(1), 3-15.

Lewis, J. (1999). Development in disaster-prone places: studies of vulnerability. London: Intermediate Technology. https://doi.org/10.3362/9781780442013

Lewis, J. (1990). The vulnerability of small island states to sea level rise: the need for holistic strategies. *Disasters*, 14(3), 241-248. https://doi.org/10.1111/j.1467-7717.1990.tb01066.x

Lewis, J. (1984). A multi-hazard history of Antigua. *Disasters*, 8(3), 190-197. https://doi.org/10.1111/j.1467-7717.1984.tb00874.x

Lewis, J. (1979). Volcano in Tonga. *Journal of Administration Overseas*, XVIII(2), 116-121.

Mann, T., Bayliss-Smith, T., & Westphal, H. (2016). A geomorphic interpretation of shoreline change rates on reef islands. *Journal of Coastal Research*, 32(3), 500-507. https://doi.org/10.2112/JCOASTRES-D-15-00093.1

Maragos, J.E., Baines, G.B.K., & Beveridge, P.J. (1973). Tropical Cyclone Bebe creates a new land formation on Funafuti Atoll. *Science*, 181(4105), 1161-1164. https://doi.org/10.1126/science.181.4105.1161

McAdam, J. (2017). The high price of resettlement: the proposed environmental relocation of Nauru to Australia. *Australian Geographer*, 48(1), 7-16. https://doi.org/10.1080/00049182.2016.1202376

McCall, G., & Connell, J. (eds.) (1993). *A world perspective on Pacific Islander migration: Australia, New Zealand and the USA*. Kensington: Centre for South Pacific Studies.

McLean, R., & Kench, P. (2015). Destruction or persistence of coral atoll islands in the face of 20th and 21st century sea-level rise? *WIREs Climate Change*, 6, 445-463. https://doi.org/10.1002/wcc.350

McNamara, K.E. (2009). Voices from the margins: Pacific ambassadors and the geopolitics of marginality at the United Nations. *Asia Pacific Viewpoint*, 50, 1-12. https://doi.org/10.1111/j.1467-8373.2009.01376.x

McNamara, K.E., & Gibson, C. (2009). 'We do not want to leave our land': Pacific ambassadors at the United Nations resist the category of 'climate refugees'. *Geoforum*, 40, 475-483. https://doi.org/10.1016/j.geoforum.2009.03.006

Méheux, K., Dominey-Howes, D., & Lloyd, K. (2007). Natural hazard impacts in small island developing states: a review of current knowledge and future research needs. *Natural Hazards*, 40(2), 429-446. https://doi.org/10.1007/s11069-006-9001-5

Mercer, J., & Kelman, I. (2010). Living alongside a volcano in Baliau, Papua New Guinea. *Disaster Prevention and Management*, 9(4), 412-422. https://doi.org/10.1108/09653561011070349

Mycoo, M. (2014). Sustainable tourism, climate change and sea level rise adaptation policies in Barbados. *Natural Resources Forum*, 38(1), 47-57. https://doi.org/10.1111/1477-8947.12033

Nicholson, C.T.M. (2014). Climate change and the politics of causal reasoning: the case of climate change and migration. *The Geographical Journal*, 180(2), 151-160. https://doi.org/10.1111/geoj.12062

Nixon, A.V. (2008). What racial hybridity? – sexual politics of mixed-race identities in the Caribbean and the performance of blackness. *Lucayos*, 1, 90-105.

Nixon, A.V., & King, R.S. (2013). Embodied theories: local knowledge(s), community organizing, and feminist methodologies in Caribbean sexuality studies. *Caribbean Review of Gender Studies*, 7, 1-16.

Nunn, P.D. (2003). Nature-society interactions in the Pacific islands. *Geografiska Annaler B*, 85(4), 219-229. https://doi.org/10.1111/j.0435-3684.2003.00144.x

Nunn, P.D., Hunter-Anderson, R., Carson, M.T., Thomas, F., Ulm, S., & Rowland, M.J. (2007). Times of plenty, times of less: last-millennium societal disruption in the Pacific Basin. *Human Ecology*, 35, 385-401. https://doi.org/10.1007/s10745-006-9090-5

O'Keefe, P., & Conway, C. (1977). Natural hazards in the Windward Islands. *Bradford Disaster Research Unit Occasional Paper 14*. Bradford: University of Bradford.

Perry, C.T., Murphy, G.N., Graham, N.A.J., Wilson, S.K. Januchowski-Hartley, F.A., & East, H.K. (2015). Remote coral reefs can sustain high growth potential and may match future sea-level trends. *Nature Scientific Reports*, 5, Article number: 18289.

Pilkey, O.H., & Young, R. (2009). *The rising sea*. Washington, DC: Island Press.

Pugh, J. (2014). Resilience, complexity and post-liberalism. *Area*, 46(3), 313-319. https://doi.org/10.1111/area.12118

Randall, J.E., Kitchen, P., Muhajarine, N., Newbold, B., Williams, A., & Wilson, K. (2014). Immigrants, islandness and perceptions of quality-of-life on Prince Edward Island, Canada. *Island Studies Journal*, 9(2), 343-362.

Rankey, E.C. (2011). Nature and stability of atoll island shorelines: Gilbert Island chain, Kiribati, equatorial Pacific. *Sedimentology*, 58, 1831-1859. https://doi.org/10.1111/j.1365-3091.2011.01241.x

Saunders, M.I., Albert, S., Roelfsema, C.M., Leon, J.X., Woodroffe, C.D., Phinn, S.R., & Mumby, P.J. (2016). Tectonic subsidence provides insight into possible coral reef futures under rapid sea-level rise. *Coral Reefs*, 35(1), 155-167. https://doi.org/10.1007/s00338-015-1365-0

Selwyn, P. (1980). Smallness and islandness. *World Development*, 8(12), 945-951. https://doi.org/10.1016/0305-750X(80)90086-8

Shaw, B. (1982). Smallness, islandness, remoteness, and resources: an analytical framework. *Regional Development Dialogue*, 3, 95-109.

Sovacool, B. (2012). Perceptions of climate change risks and resilient island planning in the Maldives. *Mitigation and Adaptation Strategies for Global Change*, 17(7), 731-752. https://doi.org/10.1007/s11027-011-9341-7

Stojanov, R. (2014). *Migration as adaptation? population dynamics in the age of climate variability*. Brno: Global Change Research Centre, Academy of the Sciences of the Czech Republic.

Sudmeier-Rieux, K.I. (2014). Resilience: an emerging paradigm of danger or of hope? *Disaster Prevention and Management*, 23(1), 67-80. https://doi.org/10.1108/DPM-12-2012-0143

Tabucanon, G.M. (2012). The Banaban resettlement: implications for Pacific environmental migration. *Pacific Studies*, 35(3), 1-28.

Taylor, G.A. (1963). Seismic and tilt phenomena preceding a Pelean type eruption from a basaltic volcano. *Bulletin of Volcanology*, 26(1), 5-11. https://doi.org/10.1007/BF02597269

Torry, W.I. (1979). Hazards, hazes and holes: a critique of The Environment as Hazard and general reflections on disaster research. *Canadian Geographer*, 23(4), 368-383. https://doi.org/10.1111/j.1541-0064.1979.tb00672.x

UNFCCC (2015). *Conference of the Parties, Twenty-first session, Paris, 30 November to 11 December 2015, FCCC/CP/2015/L.9/Rev.1*. Bonn: UNFCCC (United Nations Framework Convention on Climate Change).

UNFCCC (1992). *United Nations Framework Convention on Climate Change*. New York, NY: UN (United Nations).

UNISDR (2017). *Terminology*. Geneva: UNISDR (United Nations Office for Disaster Risk Reduction). http://www.preventionweb.net/english/professional/terminology

Webb, A.P., & Kench, P.S. (2010). The dynamic response of reef islands to sea-level rise: evidence from multi-decadal analysis of island change in the Central Pacific. *Global and Planetary Change*, 72, 234-246. https://doi.org/10.1016/j.gloplacha.2010.05.003

Weeramantry, C. (1992). *Nauru: environmental damage under international trusteeship*. Oxford: Oxford University Press.

Weisler, M.I. (1994). The settlement of marginal Polynesia: new evidence from Henderson Island. *Journal of Field Archaeology*, 21(1), 83-102.

Wilhite, D.A., & Glantz, M.H. (1985). Understanding the drought phenomenon: the role of definitions. *Water International*, 10(3), 111-120. https://doi.org/10.1080/02508068508686328

Wisner, B., Blaikie, P., Cannon, T., & Davis, I. (2004). *At risk: natural hazards, people's vulnerability and disasters*, 2nd edn. London: Routledge.

Woodroffe, C.D. (2008). Reef-island topography and the vulnerability of atolls to sea-level rise. *Global and Planetary Change*, 62, 77-96. https://doi.org/10.1016/j.gloplacha.2007.11.001

Wyett, K. (2014). Escaping a rising tide: sea level rise and migration in Kiribati. *Asia & the Pacific Policy Studies*, 1(1), 171-185. https://doi.org/10.1002/app5.7

Yamamoto, L., & Esteban, M. (2014). Atoll island states and international law: climate change displacement and sovereignty. Berlin: Springer. https://doi.org/10.1007/978-3-642-38186-7

Yamano, H., Kayanne, H., Yamaguchi, T., Kuwahara, Y., Yokoki, H., Shimazaki, H., & Chikamori, M. (2007). Atoll island vulnerability to flooding and inundation revealed by historical reconstruction: Fongafale Islet, Funafuti Atoll, Tuvalu. *Global and Planetary Change*, 57(3-4), 407-416. https://doi.org/10.1016/j.gloplacha.2007.02.007

Yates, M.L., Le Cozannet, G., Garcin, M., Salai, E., & Walker, P. (2013). Multidecadal atoll shoreline change on Manihi and Manuae, French Polynesia. *Journal of Coastal Research*, 29(4), 870-882. https://doi.org/10.2112/JCOASTRES-D-12-00129.1

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Maritime and island culture along the Kuroshio Current

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ABSTRACT: This guest editorial introduces *Island Studies Journal*'s special thematic section on 'Maritime and island culture along the Kuroshio Current'. Although the islands of Far East Asia are typically studied individually or within national frameworks, they are in fact joined together by the Kuroshio Current, the world's second-large ocean current. Over the millennia, lifestyles, technologies, religions, and other cultural practices have spread along the Kuroshio Current, leading to the formation of a distinctive oceanic cultural sphere. In order to understand the island cultures within the region, one must take into account interconnections facilitated by the Kuroshio Current. This special thematic section includes papers on sea deity beliefs, pork food culture, and place naming on islands along the Kuroshio Current, with special focus on Jeju (Korea), Zhoushan Archipelago (China), Green Island (Taiwan), and the Ryūkyū Islands (Japan).

Keywords: Far East Asia, island culture, Kuroshio current, maritime culture

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The Kuroshio Current is the second largest ocean current after the Gulf Stream. The Kuroshio Current starts off along the east coast of Luzon, Philippines, passing through Taiwan, the Japanese Ryūkyū Islands, the East China Sea, Korea's Jeju Island, and along both the western and eastern coasts of mainland Japan. It joins the Oyashio Current to the east of Japan to become the North Pacific Current. In the regions where the Kuroshio Current flows, there are many scattered islands belonging to different countries. The Kuroshio Current connects and enables the cultural and technical interactions within the Far East Asia Pacific region. The influence of this current has created a degree of universality and specificity for island oceanic cultures in the region.

There have been exchanges of resources and people moving along this current since ancient times. Southern fish species such as anchovy, snapper, mackerel, Japanese Spanish mackerel, and whales migrate along the Kuroshio Current. There have been cultural and lifestyle exchanges among people who have travelled along this current. There has been a movement that created a shared civilization, what could be called the 'Kuroshio Road', including the sharing of fishing methods, marine culture, soy/miso culture, and marine deity culture. Such traces remain in the Kuroshio island culture to this day, and it has been argued that they should be understood as the marine cultural characteristics of the Kuroshio Current.

Far East Asia, where the Kuroshio Current flows, is subject to conflicts of interest on historical, political, and economic grounds among the various countries in the region (including the Philippines, Taiwan, Japan, Korea, and China). Such conflicts or tension have impeded interest in the idea of a shared maritime culture connected by the current. Maritime culture research has thus been limited to the coastal fisheries of each country and the study of lifestyles and livelihoods without understanding ocean currents and movements. As tensions regarding maritime borders have risen, it has become easy to miss the natural maritime cultural characteristics of the islands of the Kuroshio Current.

It is only possible to gain a true understanding of a sea and its associated maritime or oceanic culture by excluding the concept of national borders. The contributors to this special thematic section of *Island Studies Journal* have all noted how resources, peoples, and cultures have moved along the ocean current in accordance with a marine ecological strategy. In recent years, there has been a scholarly movement to place greater attention on Far East Asian islands, where such ecological strategies have been maintained, leading to several workshops with researchers from Taiwan, China, Japan, and Korea. This research exchange has become an important starting point for establishing the foundations for a form of maritime culture research that is not bound by national borders. This has revealed traces of cultural and resource exchange among the islands of the Kuroshio Current going back many hundreds of years, including pigeon culture, fishery technology, maritime culture, and oceanic religious. The present special thematic section presents three papers that explore these issues, helping to introduce this discussion to English-language scholarship.

Heo and Lee (2018) investigate a specific marine faith on islands along the Kuroshio current. Given that few studies have been undertaken concerning oceanic rituals and sea deity beliefs along the Kuroshio Current, their research represents a starting point for this field. Heo and Lee find a special religious space in the Kuroshio oceanic cultural sphere. Islands that are distant from human settlements are recognized as birthplaces of deities and special religious spaces. Examples include Korea's Jeju Island, China's Zhoushan Archipelago, and Japan's Ryūkyū Islands. Heo and Lee research the manner in which the coming of deities from islands across the sea is a central characteristic of Kuroshio maritime faith. This is because the sea is recognized as a divine space. They also consider deities that are said to periodically visit islands, presiding over wind, food, and good fortune. Heo and Lee sketch out connections between sea deity traditions from islands throughout the region. Because Jeju is located on the final branch of the Kuroshio Current, it has absorbed diverse oceanic beliefs and elements of maritime culture from other islands. Through this paper's analysis, it is possible to understand the multilayered structure and historically conditioned nature of maritime culture along the Kuroshio Current.

Lee and Hyun (2018) write about the pork food culture of Luzon Island, Taiwan, Okinawa, and Jeju. They specifically investigate pork food culture in Okinawa and Jeju with respect to the formation of an ecological community, showing that pork food culture is important for island communities along the Kuroshio Current. This pork food culture is viewed as an environmentally conditioned factor in maintaining an island's ecological community. Lee and Hyun examine Okinawa's and Jeju's breeding spaces for dung-eating pigs, butchering, distribution of pork meat, combinations of pork and other food ingredients, and community meals. They show how each category affects ecological values and cultural identity on these islands, and they propose pork food culture as characteristic of a shared maritime culture. Although each island possesses some unique aspects, Lee and Hyun find that pig breeding and pork play a major role in creating a sustainable resource circulation system. As a system to promote community solidarity, there is a rational decision-making process in the butchering and distribution pork, a fair division of labour, and community rituals. The creation of a system of food resource circulation that combines pork with a variety of other ingredients is also found to effectively maintain and sustain the island community. This shows that it is possible to learn from tradition when discussing island sustainability.

Peter Kang focuses on name changes concerning the island that is currently known as Green Island, located around 33 km off the southeast coast of Taiwan. Kang analyses name changes for Green Island with respect to people who travelled along the Kuroshio current. Green Island had at least four different names up until the end of the Second World War, names assigned by Austronesians migrating to eastern Taiwan along the Kuroshio Current, by Catholics travelling between Ryūkyū and Luzon in the Spanish Philippines in the late-16th and early-17th centuries, and names originating from shipwreck survivors calling for

rescue. Kang thus analyses how people moving along the Kuroshio Current have affected the formation of island toponyms and illustrates the cultural influence of people who have moved along the Kuroshio Current. Although the name Green Island has been used since 1949 and has no connection with the Kuroshio Current, some place names on the island and in the seas around it still show the influence of the current. This is especially true for fishing grounds, created mainly by the Kuroshio Current, which are related to islanders' cultural memory. The cultural dynamics of the peoples who have moved along the Kuroshio Current are reflected in the island's changing names. This is true for many other islands along the Kuroshio Current as well, where cultural movement and exchange have played important roles in determining island names and identities and provide important clues to understanding an island community's cultural trajectory.

The aforementioned Kuroshio maritime cultural studies on beliefs, pork food, and place naming highlight the impossibility of understanding any one island's culture and identity simply by studying it in isolation. Data collection and research on Kuroshio islands and their cultures can contribute to a comprehensive and holistic understanding of shared maritime cultures across the Asia-Pacific region. The sea in which the Kuroshio Current flows is not just a geographical unit but also an integration of trajectories for those who live and have lived in the area.

Islands in the Kuroshio Current have undergone great social change under the dynamics of various global powers. As such, this single maritime cultural area has been conceptually segmented and coloured by nationalism. I hope that understanding of the islands' maritime culture will improve through the adoption of oceanic perspectives. The aforementioned studies in this special thematic section thus mark a starting point for such integrated future works on 'the Kuroshio oceanic cultural sphere'.

References

Heo, N.C., & Lee, H.J. (2018). Sea deity beliefs of the Kuroshio oceanic cultural sphere: maritime traditions and cultural interaction among Jeju Island, Zhoushan Archipelago, and the Ryukyu Islands. *Island Studies Journal*, 13(1), 171-184. https://doi.org/10.24043/isj.55

Kang, P. (2018). The influence of the Kuroshio Current on place-naming on Green Island, Taiwan. *Island Studies Journal*, 13(1), 185-194. https://doi.org/10.24043/isj.58

Lee, S., & Hyun, H. (2018). Pork food culture and sustainability on islands along the Kuroshio Current: resource circulation and ecological communities in Okinawa and Jeju. *Island Studies Journal*, 13(1), 195-208. https://doi.org/10.24043/isj.61

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Sea deity beliefs of the Kuroshio oceanic cultural sphere: maritime traditions and cultural interaction among Jeju Island, Zhoushan Archipelago, and the Ryukyu Islands

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ABSTRACT: This study analyzes sea the deity myths of Jeju Island (Korea), the Zhoushan Archipelago (China), and the Ryukyu Islands and Kyushu Region (Japan). The folk culture permeating this region is a common creation produced by long-term interactions among the islands via the Kuroshio Current, starting with primordial sea imagery. Jeju, on the last branch of the Kuroshio Current, was positioned to embrace the cultures of the Korean Peninsula, the Japanese archipelago, and north and south China. Jeju's people had opportunities to absorb oceanic culture, such as oceanic beliefs, myths, and rituals that moved along the maritime route. However, Jeju's historical political relations, such as conflict, negotiation, conquest, and submission, shaped and supplemented the maritime traditions. The religious system slowly changed over time, and yet the islanders maintained a sense of identity derived from the ocean. This collective identity relates to the fact that many elements of the Kuroshio oceanic cultural sphere simultaneously existed on various small regional islands across the region.

Keywords: Jeju Island, Korea, Kuroshio Current, maritime traditions, oceanic cultural sphere, Ryukyu Islands, sea deity beliefs, Zhoushan Archipelago

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Introduction

This study considers the oceanic beliefs, myths, and rituals of islands along the Kuroshio Current 黑潮海流, namely the island of Jeju 제주도 (Korea); the Zhoushan Archipelago 舟山群島 (China); the Ryukyu Islands 琉球諸島 (Japan), including Okinawa 沖繩本島; and Kyushu 九州 (Japan). Previous studies have focused on specific themes in the region's oceanic faiths and have described data collected through field studies of specific areas. In contrast, the present study conducted a comprehensive survey across topics and themes for simultaneous examination and comparison.

As Luo and Grydehøj (2017) argue, islands have long been significant within the myths and religions of mainland civilizations, not only in the Western world but also in East Asia. Within the field of island studies, however, few attempts have been made to consider the role

of islands in the religions and mythologies of islanders themselves. The present study suggests that some of the same islands that possess spiritual significance for mainlanders themselves possess local traditions positing the existence of sacred islands elsewhere, in this case within the cultural sphere formed by an ocean current. This study thus attempts to place the particularly island-rich maritime space between Korea, China, and Japan within a new form of archipelagic relationality (Pugh, 2018; Lee et al., 2017; Roberts & Stephens, 2017; Rankin, 2016).

The islands in our research belong to various states, but they share similar folklore, myths, and rituals. Their shared island geography may encourage similar perceptions and understandings of the natural environment. Moreover, although there may be a degree of universal similarity between belief systems, these islands' maritime traditions are exceptionally similar to one another due to their location in a single oceanic cultural sphere, that of the Kuroshio Current. The Kuroshio is similar to the Gulf Stream in that it is a strong western boundary current, and it is one of two major warm currents that run through the seas of East Asia. It flows past Indonesia, Malaysia, Vietnam, Taiwan, and China (the southern portion of the Yangtze River 长江 in Guangdong 广东省, Fujian 福建省, and Zhejiang 浙江省 Provinces), Ryukyu in Japan, and Jeju in Korea. Its direction is northeastward, and it forms the basis for the sea routes and cultural exchanges of East Asia's coastal and island regions. Under its influence, the oceanic regions have had many opportunities for exchange, and frequent maritime interactions among them are reflected in the similar cultures and folklore throughout the region.

Figure 1: Map of the Kuroshio oceanic cultural sphere, including Jeju and the Korean Peninsula (Korea); Zhoushan (China); and Kyushu and the Ryukyu Islands, including Okinawa) (Japan). (Ⓒ Adam Grydehøj, 2018; adapted from Ⓒ2018 Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Landsat/Copernicus, Google, ZENRIN)

Jeju is the final landmass within the Kuroshio Current and is thus an optimal location for a maritime hub encompassing the Korean Peninsula, the Japanese Archipelago, Ryukyu, and the northern and southern regions of China. Over the millennia, this regional inclusiveness nourished Jeju's unique maritime culture while maintaining the characteristics of the Kuroshio oceanic cultural sphere. The Kuroshio plays a prominent role in Jeju's traditional oceanic faiths, myths, and rituals.

This study introduces and analyses characteristics of the Kuroshio's oceanic cultural sphere based on a review of previous literature and survey data. By identifying the islands' similarities and differences, this study clarifies the formative process and complex nature of Jeju's maritime traditions and its 'same nature, independent culture' characteristics. The islands under study have been subject to a number of both shared and distinct historical processes, which are considered here. This study is rooted in an examination of the specific nature of rituals and their evolutionary process, including a critical review of previous relevant studies.

Jeju's oceanic paradise faith and its evolution

Jeju and Ryukyu are noted in the Korean Peninsula and Japan for their cultural distinctiveness and uniqueness. These two oceanic regions have specially designated spiritual spaces. Byeongnang-guk 벽랑국 / 碧浪國, also referred to as the Three Clans Myth, exists on Jeju. Gangnam Cheonja-guk 강남천자국 / 江南天子國 (Realm of Gods Located beyond the Sea) and Ieo-do 이어도 / 이어-島 are also on Jeju. In Ryukyu, Nirai Kanai ニライカナイ and Paipatiroma ペイペテ—ロ (an island uncovered by waves in the folklore of Hateruma 波照間島, in Yaeyama 八重山諸島) are sites where deities are believed to have originated. Although they have different names, these spiritual spaces share the characteristic of being far across the sea from human settlement. We refer to these places as 'oceanic paradises'.

These oceanic paradises places were seen as giving birth to the folklore, myths, and rituals of their respective islands. Examining the characteristics of these oceanic paradises can reveal much about islanders' psychological and historical contexts and their relationships with the sea. Jeju has a particularly wide variety of oceanic paradise beliefs, which originated in the earliest mythical imaginations of the Neolithic era and ancient times, supplemented by historical experiences and interpreted truths. Comparison between the oceanic paradise beliefs of Jeju and Ryukyu can assist in our understanding of how they evolved and of an important cultural strand running through the Kuroshio region.

First, Byeongnang-guk (Jeju) and Nirai Kanai (Ryukyu) possess the basic features of oceanic paradises. The names of these oceanic paradises reflect their mythological or ritualistic features rather than historical experiences. Byeongnang-guk clearly means 'Country of Jade-Green Waves', but the etymology and meaning of Nirai Kanai is unclear. Some people interpret it to mean 'Realm of Roots', but others interpret it as 'Place where the Sun Rises and Sets' or 'Ideal Land Far Away'. The Jeju and Ryukyu peoples refer to these idealized places using their imaginations and believe that their deities originated where the sun rises or in a faraway land across the sea.

Byeongnang-guk is an oceanic paradise of Jeju's foundation myth. In former times, Jeju was home to the ancient country of Tamna-guk 탐라국 / 耽羅國 (2337 BCE~938 CE), which was distinct from the Korean Peninsula and thus gave its people space to create a distinct foundation myth. According to that myth, Tamna-guk's three divine founders (Go 고 / 高, Yang 양 / 梁, Bu 부 / 夫) emerged from the ground. Their spouses were three princesses who drifted from Byeongnang-guk to the shores of Tamna-guk inside a large box or crate.

Early sources referred to Byeongnang-guk as Japan (李元鎭, 耽羅誌, 1653). However, this connection was made by adapting the narrative in such a way as to support historical and

rational explanations. In the myth, the three princesses brought with them the seeds of five major grains, oxen, and horses. As such, the myth explains that agriculture and animal husbandry in Tamna-guk were introduced from the oceanic paradise of Byeongnang-guk. The sea was the path by which the divine beings came to the island with the foundations of civilization.

Belief in the oceanic paradise of Nirai Kanai is spread throughout Ryukyu, but the name and location of this paradise varies significantly from island to island. It is referred to by such names as Nirai Kanai, Niruya Kanaya, Girai Kanai, Miruya Kana, Nirai, Nire, Niran, and Niro, and its location is believed to be south, east, or west of the islands. The islanders believe that this is the dwelling place of the deities who brought seeds (such as barley, millet, and soybeans) and fire to their islands. Nirai Kanai is most often mentioned in the agrarian rituals seeking to encourage abundance, which still are avidly practiced and culturally transmitted on some islands in the archipelago.

Jeju's Three Clans Myth (Byeongnang-guk) has become obsolete, in part because the coming together of the male and female deities was a mythologizing technique of the political regime of the ancient state of Tamna-guk. In contrast, the Nirai Kanai rituals persist because they relate to Ryukyu's shamanic beliefs. Nevertheless, there are clear similarities between the two mythical oceanic paradises and the deities that originated from them. It is also noteworthy that Byeongnang-guk and Nirai Kanai are longstanding systems of belief independently produced by islanders at a time when the islands were not subjected to mainland jurisdiction and suppression.

Gangnam Cheonja-guk is another oceanic paradise belief and is the place from which Jeju's shamanic deities are believed to have originated. Deities such as Yeongdeung 영등 / 靈燈 and Maljet Ttaragi of Yowang Hwangje-guk 요왕황제국말젯딸아기 arrived from Gangnam Cheonja-guk via the Kuroshio. Yeongdeung is a female wind deity who visits Jeju each year to preside over the bounty of seafood. She is associated with various sea deities, such as the guardian deities of fishers and female divers, tutelary deities who provide oceanic safety, deities of safe childbirth and parenting, and the divinity at the foundation of the Jeju's indigenous shrine religion. Gangnam Cheonja-guk is similar to Byeongnang-guk and Nirai Kanai in that it is a divine place across the sea. However, Gangnam Cheonja-guk involves belief in an oceanic paradise that developed through the incorporation of islanders' historical experiences, which distinguishes it from the oceanic paradises described above. The characteristics of Gangnam Cheonja-guk, as expressed through Jeju's shamanic myths, can be described as follows:

(1) Gangnam Cheonja-guk and Jeju are connected by a sea route.
(2) Gangnam Cheonja-guk is understood as the place from which deities originated.
(3) Gangnam Cheonja-guk is where deities demonstrated their worthiness and were transformed into true deities.

According to songs of the simbang 심방 (shamans in the Jeju dialect), Gangnam Cheonja-guk means 'China'. Shamanic song in Jeju occurs in particular sequences. In the Nalgwaguk-sumgim 날과국섬김 sequence, the shaman says: "Gangnam Cheonja-guk is China." This is a formula by which all shamans sing the same song. It is likely that Gangnam Cheonja-guk is a compound word, in which Gangnam refers to the region south of the Yangtze River (Jiangnan 江南), while Cheonja-guk 天子國 refers to mainland China because it means the 'Realm of the Son of Heaven', a term with which the Chinese designated their country because they believed the emperor to be the son of heaven. The term thus creates a synecdoche to encompass all of China. The Jiangnan region was key to maritime trade and transport across successive Chinese dynasties. It was mythologized as an oceanic paradise in response to Tamna-guk's dependence on trade with Ningbo 寧波, which was the largest trading port in the Jiangnan region. Nam-chun Heo (허남춘, 2011, pp. 202-204; translation

our own) points out that the trade between Ningbo and Jeju is evidenced not just by ancient written records but also by archaeology:

> The Wu Zhu coins 五銖錢 (ancient Chinese coins minted from 118 BCE onward) unearthed while constructing a harbour in Jeju in 1928 [were] excavated along with Wang Mang coins 王莽錢 (various types of coins issued by Wang Mang during the Xin Dynasty 新 period in China), and thus they are datable to a period that does not extend much beyond the first century CE.

Maritime trade between Jeju and Jiangnan is thus known to have occurred via the Kuroshio long before the Sadan 斜斷航路 (oblique or diagonal) route between China and the Korean Peninsula was established in the 6th and 7th centuries CE.

The political relationships among China, the Korean Peninsula, and Tamna-guk significantly influenced the development of Gangnam Cheonja-guk. In the early 12th century, Tamna-guk was annexed by Goryeo 高麗, which ruled the Korean Peninsula. During the first half of the 13th century, the Yuan Dynasty 元 frequently invaded Goryeo and intervened in its domestic affairs, and Goryeo became a vassal state of the Yuan in the second half of the 13th century. The Yuan sent governors (darugachi 達魯花赤), and it directly and comprehensively interfered in Tamna-guk's political and administrative affairs. The Yuan took control of Goryeo's governance, elevated Tamna-guk's status from county to state, and established military and civil governors on the island there. The Yuan's aim in this was to emphasize that Tamna-guk was not subordinate to Goryeo but was directly controlled by the Yuan (李元鎭, 2002, pp. 12-16). The Yuan recognized Tamna-guk as the geographical midpoint of the sea route to Japan and as the shortest route for transporting supplies from the Korean Peninsula to the Yuan. Furthermore, Tamna-guk's natural environment was well suited to animal husbandry, and its people had excellent shipbuilding skills, developed over centuries of maritime experience. Tamna-guk was in addition a strategically important place from which military expeditions could be launched.

The Yuan Dynasty used Jiangnan's ports to implement and expand its maritime policies and oceanic training (朴貞淑, 2012, pp. 567-590). Under Yuan control, Tamna-guk built the navy intended to invade Japan, reared warhorses, and provided other commodities, which were transported to Yuan from a harbour (currently called Mangjang-po 망장포 / 網場浦) in southeast Tamna-guk. Tamna-guk was under Yuan control for about 100 years. During this period, China's states referred to their rulers as Cheonja 천자 / 天子 ('Sons of Heaven') and to their locations as Cheonja-guk 천자국 / 天子國 ('Realm of the Son of Heaven'), and they exerted power over the Korean Peninsula, Japan, and beyond. Gradually, this sense of power transformed into a mythology.

Similarly, Nam-chun Heo (허남춘, 2017, p. 371; translation our own) observes the following regarding the emergence of Gangnam Cheonja-guk:

> In the medieval period, since China was regarded as the center of civilization, there was a change toward increasing the authority of the deities in the shamanic myths of Jeju by claiming that the great deities were based in Gangnam Cheonja-guk, the land of the Son of Heaven in China.

The belief that China was the deities' place of origin beyond the sea did not originate in Jeju's shamanic ideation. However, when the ideas strengthened sufficiently to incorporate a hegemonic ideology within historical and imaginary experiences, the oceanic paradise came to be called Gangnam Cheonja-guk. Characteristic (2) stated above (that in Jeju mythology,

Gangnam Cheonja-guk is understood as the place from which deities originated) reflects this historical context.

Characteristic (3) is supported by another rationale derived from existing oceanic beliefs about otherworlds. This rationale unfolds as a narrative concerning deities that originated in Jeju (instead of in an oceanic paradise) but that crossed the sea to quell disturbances in Gangnam Cheonja-guk, then returned to Jeju to become deities. In this myth, Gangnam Cheonja-guk is a place in which the deities demonstrated their worthiness to become deities. The myths always include events in which the deities solve problems using their extraordinary abilities. Thus, Gangnam Cheonja-guk is the place where deities undergo deification and strengthening of their divinity (허남춘, 2017). These deities solved problems that the rulers of Gangnam Cheonja-guk could not fix, refused the local rulers' requests to remain, and returned to Jeju to become deities, suggesting that Characteristic (3) above includes islanders' hopes and dreams of eliminating domination and subordination.

The mythology of oceanic paradises increasingly added historical references and featured real rather than imaginary places. The Jeju myth of Ieo-do and the Ryukyu myth of Paipatiroma are examples of this evolution because they demonstrate the process by which the divine oceanic paradises incorporated reality. All of Jeju's oceanic paradises (Byeongnang-guk, Gangnam Cheonja-guk, and Ieo-do) share the characteristic of including the island's history of oppression by the mainland.

The Ieo-do myth directly incorporated Jeju's historical relationship with China. According to the myths collected by Seong-gi Jin (진성기, 1993), Ieo-do is the place where a man named Go Dongji 고동지 was stranded as the sole survivor of a voyage to China to present a tribute of horses. Go Dongji arrived in Jeju on a Chinese fishing boat, accompanied by a woman he had met in Ieo-do, who became a village deity. The woman's name was Yeodot Halmang 여돗할망 (Yeodot is a variant of Ieo-do) (진성기, 1993, pp. 34-36). Toru Takashi (高橋亨, 1974, pp. 54-55) says that Ieo-do is where ships sent to China with cattle, horses, and other products were permanently docked during the Yuan Dynasty's rule of Jeju. The protagonists of these myths arrived in Ieo-do because of Chinese oppression.

This historical context was incorporated into the myth during its cultural transmission. In the myth, Ieo-do is midway on the sea route between Jeju and Jiangnan, and ships carrying tribute were said to sometimes stop there. Ieo-do thus serves as the oceanic paradise that people encounter before reaching Jiangnan. The people who stopped at Ieo-do rarely returned to the human world, and the people of Ieo-do who accompanied the rare returnees were considered deities. This aspect of the myth shows the blending of the islanders' history of their ordeals with their mythical oceanic paradises. Thus, the belief in a paradisal place beyond the sea became the foundation for the belief in oceanic paradises as accessible to humans. Although Ieo-do was not strictly a divine place, it was a haven for people who were shipwrecked, and it was a paradise in which people escaping the oppression of foreign powers could live forever. However, the myth of Ieo-do also expresses islanders' fears of being lost or abandoned at sea, and it comforts them with the belief that those who are lost at sea are living happily on Ieo-do. The Ieo-do myth thus concerns a liminal space that is neither human nor divine.

The Ryukyu myth of Paipatiroma illustrates the process of a mythical oceanic paradise's transition in thought from the divine to the human and from paradise to refuge. Yong-ui Kim (김용의, 2012, pp. 240-244; translation our own) states that "Paipatiroma is a paradise mentioned in the myths of Haterujima, an island in the Yaeyama Islands, and it is based on the historical invasion of Okinawa by the Japanese feudal domain of Satsuma." According to Kunio Yanagita (柳田國男, 1940, p. 133), in the past, Okinawans found it so difficult to bear the harsh taxes imposed upon their home that they fled by sailing across the sea and founded Paipatiroma as a place of refuge. Similar to the myth of Ieo-do, the islanders' struggles under

the oppression of invading powers significantly influenced the evolution of the myth. However, Paipatiroma is an oceanic paradise built by humans, whereas Ieo-do is a natural oceanic paradise of deities. The composite nature of the Ieo-do myth allows us to examine the transition of the oceanic paradise motif from myth to legend.

Oceanic paradise beliefs, which began with islanders' mythological ideation, as they embraced the sea as a place of reverence, gradually commingled with history and reality. At a certain point, hegemonic ideology was incorporated into the myths and existing beliefs to eventually dominate as a functional rationale that reinforced the deities' divinity. The oceanic paradise beliefs prevalent in the myths became entwined with the people's lived experiences, which created oceanic paradises in the human world. Ultimately, this motif mingled with the islanders' intense hope of escaping oppression, which left its mark on island legends.

Jeju's flotsam faith and its relationship to the Kuroshio Current's oceanic culture

In coastal and island regions, there is a tendency to regard things that drift on the sea (flotsam) as divine. Yong-joon Hyun (현용준, 2002, pp. 514-515) notes that the flotsam motifs usually found in the Jeju myths are also common elsewhere, such as on Tsushima Island 대마도 / 對馬島, Kyushu, Ryukyu (Okinawa), Taiwan, the Philippines, and Vietnam. These regions have similar flotsam myths that relate deeply to their founders' origins. All these mythical motifs are in cultures strongly influenced by the Kuroshio.

The island regions of the southern lanes of the maritime routes between Korea, China, and Japan feature myths with similar narrative frameworks, which suggests a path of transmission. Furthermore, these motifs have limited reach into the mainland areas of these three countries, which is useful for distinguishing between mainland and oceanic paths of transmission. Therefore, if a group of sea routes along which highly similar myths or beliefs propagate were defined as a particular oceanic cultural sphere, and if its characteristics were investigated in detail, it might be possible to identify some of the ways in which myths and beliefs were transmitted within the Kuroshio oceanic cultural sphere.

There are two types of flotsam myths. One type concerns a divine being that drifts ashore and becomes a progenitor or founder deity. The other type concerns a divine being that becomes a tutelary deity associated with the fishing industry or other activities. This section of the paper examines and compares myths based on the premise that flotsam motifs in the foundation myths originated from folk beliefs concerning flotsam.

There are numerous shrines on Xiazhi Island 蝦峙島 of the Zhoushan Archipelago. Shengtang-miao 聖塘墓 (Shengtang Shrine), Suofang-dian 梭枋殿 (Suofang Hall), and Huangsha-dian 黃沙殿 (Huangsha Hall) enshrine as deities items that drifted ashore off the sea currents. These items include caskets, spirit tablets, and cabinets (曲金良, 2007, p. 4). The oceanic beliefs of Xiazhi consider caskets and cabinets as storage boxes or sacred objects, and spirit tablets serve as substitutes for spirits, thereby providing spatial images. Kyung-yup Lee (이경엽, 2007, p. 163) discusses the myths surrounding these items in detail, with the Shengtang-miao origin myth explaining how a 'wooden cabinet' drifted across the sea and was then worshipped as a deity. The deity rewards worshippers with the promise of abundant fishing and prosperous business dealings. The myth began as one person's faith, but the deity's miraculous powers soon became widely known, and the belief spread throughout the island. As a result, the Shengtang bodhisattva 聖塘菩薩 ('bodhisattva' is a general term for 'deity' in East Asian religions) became a deity of ships, fishers, and abundance. Shengtang-miao is the most widely venerated and influential shrine on Xiazhi, to the extent that, when an epidemic spread across the island, the islanders prayed to the bodhisattva enshrined in Shengtang-miao for the health and safety of their villages.

Flotsam motifs are ubiquitous in the folk beliefs and shamanic myths of Jeju. A specific ancestral deity is worshipped by each individual Jeju family, most commonly through the family's job or occupation, which is transmitted from generation to generation, with believers accepting the (occupational) circumstances as fate. Flotsam from shipwrecks is sometimes believed to be shipwrecked souls and is worshipped as ancestors. Sometimes, gourd bottles that have drifted along the sea currents from Japan become household deities, and sometimes wooden debris washed ashore from the sea is used in a household and later worshipped as a guardian deity of that household or family's occupation (interview with Jeju simbang Seo Sunsil, 30 May 2017).

In the shamanic myths of Jeju, all the deities who arrived on the island from the sea were inside wooden boxes or cases made of stone and iron (mythical materials). This mythical narrative is a typical formula for most of Jeju's transmitted bonpuri 본풀이 (shamanic narrative songs). Furthermore, the deities that drifted ashore are differentiated as male or female. The female deity is either an exiled disobedient daughter of the Dragon King (in shamanic myths) or is a snake deity (in the Chil-seong Bonpuri 칠성본풀이 / 七星-본풀이, the story of a snake worshiped as a God in Jeju folk belief) who was discovered and venerated by fishers and female divers after she drifted ashore. The function of the daughter of the Dragon King gradually changed from that of a tutelary deity of oceanic abundance and fishery to that of a goddess of childbirth and childrearing. The snake deity was originally an occupational deity who guarded fishers and female divers, but the myth was conflated with beliefs that deified snakes, and she was eventually established in diverse areas as a deity who bestows wealth.

Regarding the male deity, the belief is that he was a human inside an iron box that drifted to the Dragon King's palace. He married the Dragon King's daughter, and then he returned to Jeju, where he was transformed into a deity. The male deity's function remains unclear, although he is an enshrined deity worshipped in the village of Gimnyeong 김녕. This coastal village has a long history of dependence on subsistence fishing.

A typical tutelary deity of fishers, named Ebisu えびす, is worshipped throughout Japan. This deity is not mentioned in either the *Kojiki* 古事記 or the *Nihon Shoki* 日本書紀 and is thus predominantly a folk deity (김용안, 2009, p. 462). The islanders believe that Ebisu brings prosperity, not only in fishery but also in commerce, and that he confers blessings upon all aspects of human life. In some regions, whales, flotsam, and other items from the sea are identified with and deified as Ebisu. Hiruko ヒルコ is an Ebisu tradition, in which Hiruko is the abandoned firstborn child of Izanami 伊邪那美 and Izanagi 伊邪那岐 (the parents of all deities and creator gods, who gave birth to the islands of Japan), mentioned in the *Nihon Shoki*, which mainly chronicles the political lineage of the economic and political center of Japan. Because Hiruko was a bad child or lacked feet and had a body like a leech, his parents cast him into the sea on a boat of reeds (金英珠, 2014). Hiruko's abandonment caused him to be conflated with Ebisu, a phenomenon that mostly occurred in the Honshu 本州, Kyushu, and Ryukyu regions. In these regions, the Ebisu faith remains robustly transmitted, and it is inferred that the conflation arose from the deep connection between the flotsam motif in the Hiruko myth and the Ebisu faith. Nishinomiya 西宮 is the mythical place where Hiruko became a god, and it remains the center of the Ebisu faith to the present day. The flotsam motif thus reversed the role of Hiruko from that of a deity cast away from the center to that of a leading deity of folk religion.

Setting aside the foundation myths, the flotsam motif of boxes, boats, and similar items always depicts the deities as related to fishing. Initially, the deities presided over fishing, but their spheres of influence gradually expanded. The chronicles of regional progenitors and national founders were originally based on the stories of sea deities worshipped by the islands' fishers. Bearing in mind the ways in which the foundation myths were compiled, it is possible

to reconstruct the process by which flotsam motifs strengthened their bases in folk belief, which lent itself to the emergence of the foundation or progenitor myths. Deities that drifted ashore appear to have been venerated across the Kuroshio region.

There are two types of flotsam beliefs: (1) an item of flotsam *per se* may be an object of worship, and (2) a deity's story may be associated with an item of flotsam to produce a narrative. A reasonable inference is that islanders' mythical imaginations, which conceived of the deities as arriving from beyond the sea, created the flotsam beliefs and that these two types blended to create the deities' epic legends. When the mythical origin stories of these deities from diverse regions are explained in terms of an archetype, similarities become evident. In Jeju, flotsam motifs are incorporated into and transmitted through related beliefs as well as through numerous shamanic and foundation myths, which demonstrate the lasting importance to the islanders of items that are washed ashore.

Jeju's Yeongdeung faith and its relationship with the Kuroshio oceanic cultures

Jeju has a body of oceanic beliefs that comprise the Yeongdeung faith. Korean folklore studies typically regard this faith as part of the general folk religion found throughout the Korean Peninsula. The Yeongdeung faith venerates Yeongdeung as a wind deity who visits the Korean Peninsula on the first day of the second month of each year, based on the traditional lunar calendar, and remains there for 15 to 20 days before returning home.

We argue, however, that there are distinct differences between the Yeongdeung faiths of Jeju and the Korean Peninsula. In the mainland version, Yeongdeung descends from heaven and grants abundance in agriculture or wellbeing to families. In Jeju, Yeongdeung arrives each year from an unknown world beyond the sea, variously referred to as Gangnam Cheonja-guk, Oenunbagi-seom 외눈박이섬 ('One-Eyed Monster Island'), and Yowang Hwangje-guk 요왕황제국 / 龍王皇帝國 ('Dragon King's Empire'). The most important difference between Jeju and the Korean Peninsula is that Jeju's beliefs specify a place of origin. Moreover, Yeongdeung is a wind goddess who presides over abundance in Jeju in contrast to the mainland version, in which she sows seeds of seaweed, fish, and shellfish into the sea. Before the development of advanced navigation, wind was the indicator of sea currents. As such, Yeongdeung controls the abundance of seafood in Jeju. The Yeongdeung ritual in Jeju is more communal than on the mainland. This ritual is the Yeongdeung-gut 영등굿, which is performed at numerous Jeju community shrines at the time when Yeongdeung is supposed to visit. A suitable study of the Yeongdeung faith in Jeju should consider its interactions with other parts of the Kuroshio oceanic cultural sphere, the Korean Peninsula, and other local myths of Jeju, and it should investigate its religious nature in terms of similarities and differences. This could enhance our understanding of the complex evolution of Jeju's Yeongdeung faith.

Relationship between the Nirai Kanai faith and the Yeongdeung faith

Nirai Kanai (Ryukyu) is a mythical oceanic paradise similar to Gangnam Cheonja-guk (Jeju). The deities that live there bring abundance to the human world. This abundance has been deified and is referred to as yuu ユ-ウ. Kazumi Takanashi and Hye-yeon Lee (高梨一美,. & 이혜연, 2004, pp. 397-402; translation our own) summarize this concept:

> Ryukyu is divisible into four areas, listed from north to south as Amami [奄美], Okinawa, Miyako [宮古島], and Yaeyama. The yuu concept is distributed across all these areas. […] It generally refers to abundance in agriculture, fishing, or hunting, but it can also mean crop yields, fish hauls, etc., and also the wealth, happiness, or prosperity that can be obtained because of abundance. Thus, it is a wide-ranging and

> inclusive concept of abundance that is not limited to agriculture, fishing, and hunting. […] Nonetheless, the origin myth positing a divine world beyond the sea that is the source of abundance, and stating that village life began when grain seeds were brought from there, is widely distributed throughout Ryukyu.

Ryukyu's Nirai Kanai faith closely resembles Jeju's Yeongdeung faith because the both involve: the deity presiding over abundance visiting the island from across the sea at regular intervals, communal rituals, and similar forms of rituals (the making of boats, welcoming or sending off of boats, and offering of prayers). In the Nirai Kanai faith, the visiting deity brings elements of civilization (including fire and the seeds of five major grains) from across the sea. This means that the abundance granted by the visiting deity pertains to other types of abundance, such as happiness, prosperity, agriculture, fishing, and hunting. In comparison, Yeongdeung's field of activity in Jeju is limited to the abundance provided by the sea.

Stories related to the provision of grain in Jeju are not found in the Yeongdeung mythology, but they are present in Segyeong Bonpuri 세경본풀이, which is a Tamna-guk foundation myth concerning a common deity. The Tamna-guk foundation myth, as described above, involves three princesses arriving on Jeju with the seeds of five major grains and livestock to meet the three deities that founded Tamna-guk. Segyeong Bonpuri is a deity myth that chronicles the life of the goddess of agriculture (Jacheong-bi), which as noted above, is also known as Segyeong. This goddess resolved a crisis in Gangnam Cheonja-guk and brought the seeds of five major grains from there. In this myth, Gangnam Cheonja-guk is part of heaven.

Jeju's local deities are usually believed to have arrived from across the sea or to have emerged from the ground, and Gangnam Cheonja-guk is usually believed to be beyond the sea. However, Segyeong Bonpuri introduces a new place, in heaven, with the result that this myth's framework contains transitionary elements. This contrasts with the original sources of the Yeongdeung faith (the motifs in the foundation myth of Tamna-guk). Moreover, research indicates that the foundation myths of Tamna-guk and Segyeong Bonpuri both emerged from the narrative structure associated with Songdang Bonpuri 송당본풀이, which is the shrine deity myth of Songdang village 송당 and the source of all shrine beliefs in Jeju (현용준, 1983; 장주근, 1986; 허남춘, 1994; 허춘 1994; 김헌선, 2005; 권태효, 2005).

Considering the above, how can the complex and multifaceted nature of the Yeongdeung faith in Jeju be explained? It is possible that this faith, as with the original faith of Ryukyu, included the abundance of agriculture as well as the abundance of the sea? According to Yong-joon Hyun (현용준, 2002, pp. 57-60), when the simbang announces "I have brought upland a dry-field rice plant or foxtail millet seeds" while performing the Yeongdeung-gut ritual, this means there will be a bumper crop that year. That the Yeongdeung faith also relates to abundance in agriculture is evidenced by the fact that the simbang who performs the Yeongdeung-gut ritual frequently mentions that Yeongdeung visits a wide region bringing the seeds. Furthermore, Yeongdeung-gut ceremonies, such as Ssi-deurim 씨드림 (seed giving) and Ssi-jeom 씨점 (seed divination), which involve the supposition that millet seeds germinate seafood and predict the seafood harvest of a given year based on the way these seeds are scattered, are well-preserved traditions in Jeju. Jeong-sik Kang (강정식, 2005, pp. 103-104) states that Yeongdeung-gut is sometimes performed in Jeju's mountainside villages, where agriculture is the dominant occupation, and the ceremony has left traces throughout the island, even in places where it is no longer performed.

The unique nature of the place where Yeongdeung-gut is performed cannot be overlooked. Jeong-sik Kang (강정식, 2005, p. 5) states:

> Even though Yeongdeung is not a shrine deity, she is received in the shrine, and

> Yeongdeung-gut is performed as a shrine ritual, and, what is more, the ritual must be performed at the main village shrine even though there are individual sea-related shrines or separate shrines devoted to sea deities.

Shrine deities remain near their believers' homes to oversee all aspects of their lives. There are thus designated places where these deities live on the land, and the rituals performed at these places are danggut 당굿 (shrine rituals). Shrine rituals for Yeongdeung are performed in all communities of believers, even though she is a deity who visits at a specific time each year and has no fixed residence. These aspects of the Yeongdeung faith demonstrate that Yeongdeung might function as a deity who grants abundance in numerous ways and is not limited to the sea.

In Jeju's shamanic tradition, Yowang Segyeong 요왕세경 is a deity related to the sea (Yowang 요왕 means 'sea', and Segyeong 세경 presides over 'sea-fields'). This pertinent case shows the process by which the Segyeong faith expanded relative to the Yeongdeung faith and how the former encroached upon the latter's domain. Similar to Yeongdeung, Yowang Segyeong is a deity who controls the bounty of the sea. As can be deduced from its name, this deity is derived from Segyeong, whose role of presiding over agricultural abundance expanded over time to include the abundance of the sea, thereby usurping Yeongdeung's role. In contrast, in the independent rituals and related myths of Yeongdeung, Yowang Segyeong is only associated with the sea by the word 'Yowang', and the myths related to this deity merely borrow the myths of the agrarian deity with little modification. It is in this context that we can understanding the performance of the seed-giving ceremonies and seed divination performed both in the agrarian Segyeong-nori 세경놀이 rituals and the Yeongdeung-gut rituals.

In summary, a female deity arrived from across the sea with the seeds of five major grains. Under the influence of the Korean Peninsula, a female deity who descended from the heavens with these seeds usurped her place. Yeongdeung thus lost the power to control the abundance of all natural things and was eventually limited to the abundance of the sea.

Relationship between the Avalokitesvara faith and the Yeongdeung faith

In addition to her other functions, Yeongdeung is venerated in Jeju as the tutelary deity of fishers and female divers, and she is believed to guard ships and boats. She is sometimes understood through comparison with Avalokitesvara, a Chinese maritime guardian deity. Avalokitesvara is a Buddhist bodhisattva who relieves the suffering of mankind and leads them toward reincarnation. Avalokitesvara has assumed various roles to suit worshippers' circumstances and needs, including geographical location and livelihood. It should be noted that Nanhai Avalokitesvara 南海觀音 (Avalokitesvara of the South Sea), who has gained prominence around the island of Putuoshan 普陀山 in the Zhoushan Archipelago, is revered as a maritime guardian deity. Putuoshan is regarded as Nanhai Avalokitesvara's home. Hwa-seob Song (송화섭, 2010, pp. 197-210; translation our own) explains this connection:

> It is possible to say that the tales of Yeongdeung Halmang [영등할망] and Seonmundae Halmang [설문대할망] in Jeju are versions of the origin tale of Avalokitesvara circulated by envoy ships and seafarers stopping in Jeju as a port of call on their journeys back and forth between Kyushu in Japan and Mingzhou [明州] in China. [...] Given that the ships passing through the southern leg of the Jeju sea lane departed from the ports of Mingzhou or Putuoshan and Luojiashan [珞珈山] in the province of Zhejiang, China, Yeongdeung Halmang is an incarnation of the Avalokitesvara Bodhisattva.

If Hwa-seob Song (송화섭, 2010) is correct, the Yeongdeung faith in Jeju developed and grew along the Kuroshio's southern maritime trade routes. From China, the Kuroshio's points

of departure include Putuoshan and the port of Mingzhou in Zhejiang Province.

Putuoshan is the only one of the four sacred mountains of Chinese Buddhism to be located on the coast. The island's rise in reputation and its foundation myth as a sacred site are closely associated with its strategic location relative to diplomatic and commercial maritime transport between China, Korea, and Japan (Bingenheimer, 2016; 주강현, 2006, p. 17). Putuoshan's Nanhai Avalokitesvara faith has been officially sanctioned since 1214. Before then, it was a faith in a tutelary deity held by a group of merchants engaged in maritime trade (程俊, 2006, p. 111). It seems unlikely that this faith amounted to much more than that, even at the time when it exerted a strong enough influence to reach the Korean Peninsula and Japan. Tamna-guk existed in Jeju long before this propagation transpired, and its foundation myth already included stories of deities voyaging across the sea with the seeds of five major grains.

We can agree that Putuoshan's Nanhai Avalokitesvara faith spread to Jeju and influenced the local Yeongdeung faith. However, the Avalokitesvara narratives are distinctly different in character from those related to the Yeongdeung faith generally accepted on Jeju. Moreover, Nanhai Avalokitesvara bears greater similarities to flotsam traditions of deities that drifted ashore than to traditions of deities that visit regularly, given that Putuoshan's foundation myth revolves around a sacred statue getting stuck on the island in the course of transit between the Chinese mainland and Japan (Bingenheimer, 2016, pp. 80–81). Yeongdeung's primary ritual function of providing abundance from the sea and land are more similar to the visiting deity faith of Ryukyu than to the Yeongdeung faith of Jeju. Yeongdeung's name and some of her attributes (wind goddess and regular visits) are the same as those found on the Korean Peninsula. It is thus unreasonable to regard Putuoshan's Nanhai Avalokitesvara as the prototype of Yeongdeung. It is more logical to understand the relationship between the two deities as involving a blending of similar faiths through maritime exchange.

The relationships between the Yeongdeung faith in Jeju and the Kuroshio oceanic cultural sphere can thus be summarized as follows. First, Jeju's Yeongdeung faith is an outcome of various combinations of sea deity beliefs in the Kuroshio oceanic cultural sphere. In essence, the Yeongdeung faith is similar to the visiting deity beliefs of Ryukyu. Jeju and Ryukyu are each located where the Kuroshio Current branches out, and these islands historically used the Kuroshio to interact with one another. Later, the Yeongdeung faith and Putuoshan's Avalokitesvara faith were transmitted through maritime exchange and influenced one another. Indications of interactions with mainland Korea are also evident in the Yeongdeung faith. Study of these traditions can thus elucidate the uniqueness of Jeju's belief system, which incorporates balanced elements of oceanic and mainland cultures.

Conclusion

This study has reviewed and compared oceanic beliefs, myths, and rituals across the Kuroshio region, with a focus on Jeju. It has examined similarities and differences in the evolutionary process, investigated the basis for Jeju's resemblances to other places, and shown the uniqueness of parts of Jeju's oceanic culture. The consciousness that underlies the folklore that permeates the coasts and islands of this region is a shared creation, produced by long-term interactions along the Kuroshio, beginning with the primordial imagery of the sea.

Because Jeju is on the last branch of the Kuroshio, it was able to incorporate ideas from the Korean Peninsula, the Japanese archipelago, Ryukyu, and northern and southern China. The people of Jeju could thus absorb oceanic beliefs, myths, and rituals along the current. The islanders used this culture in establishing their own system of faith and folk rituals. However, the islanders' historical experiences of interaction with external entities, such as conflicts, negotiations, conquests, and domination, shaped their oceanic traditions. In this process, the existing mythical system slowly changed even as its foundations remained strong. It is nevertheless important to note that many folk elements of the Kuroshio oceanic cultural

sphere emerged independently on small islands around the region and are characteristic of the 'same nature, independent culture' circumstances found throughout the region.

Similar oceanic paradise faiths exist in Jeju and Ryukyu. In Ryukyu, most of the oceanic paradises are similar, but Byeongnang-guk, Gangnam Cheonja-guk, and Ieo-do all formed in different manners and different context. Our comparison has revealed that the oceanic paradise beliefs gradually emerged from the islanders' mythical imaginations, which revered the sea, and gradually blended with history and experience. However, more clues are available on Jeju to examine the beginnings and subsequent transformation of the oceanic paradise faiths and related myths. Regarding the Ieo-do folktales, most of the narrative elements relate to the sea deity faith.

The coastal and island regions of the Kuroshio oceanic cultural sphere produced and shared flotsam motifs and faiths that emerged from the islanders' mythical imaginings that deities arrived from beyond the sea and from the narratives of deities that wandered the sea. This faith's status increased in strength and influence over time, and elements of it were borrowed and added to foundation and progenitor myths. Jeju has numerous motifs related to shamanic myths and foundation myths as well as individual beliefs related to flotsam. The disseminated cultural elements became the foundation of Jeju's popular faith through a continuous process of differentiation and integration.

Jeju's Yeongdeung faith is a mixture of the various faiths of the Kuroshio oceanic cultural sphere. Its essence is the visiting deity faith of Ryukyu, which was later transmitted to the Southern Sea region of Putuoshan in China, influencing Buddhist folk beliefs surrounding Avalokitesvara. Even the interactions with the Korean Peninsula could be derived from this faith. Yeongdeung is thus an appropriate subject for discussing Jeju's unique characteristics regarding mutual acceptance of oceanic and mainland cultures and its construction of a system of faith organized around diverse elements.

Oceanic culture spread throughout the Kuroshio region, but the process was never unidirectional. Culture ebbs and flows like the ocean current, and it aggressively develops, shapes, and resembles the characteristics of humans who explore the sea. The concept of 'same nature, independent culture' is thus accurate for describing Jeju in the Kuroshio oceanic cultural sphere. The findings of this study offer ways of expanding global recognition of Jeju as the home of the gods and the living folk culture of South Korea as well as ways of initiating discourse on Jeju's identity relative to many of the coastal areas and islands of the Kuroshio oceanic cultural sphere.

References

Bingenheimer, M. (2016). *Island of Guanyin: Mount Putuo and its gazetteers*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190456191.001.0001

Lee, S. H., Huang, W. H., & Grydehøj, A. (2017). Relational geography of a border island: local development and compensatory destruction on Lieyu, Taiwan. *Island Studies Journal*, 12(2), 97-112. https://doi.org/10.24043/isj.33

Luo, B., & Grydehøj, A. (2017). Sacred islands and island symbolism in Ancient and Imperial China: an exercise in decolonial island studies. *Island Studies Journal*, 12(2), 25-44. https://doi.org/10.24043/isj.19

Pugh, J. (2018). Relationality and island studies in the Anthropocene. *Island Studies Journal*, 13(1). https://doi.org/10.24043/isj.48

Rankin, J.R. (2016). Tracing archipelagic connections through mainland islands. *New Zealand Geographer*, 72(3), 205-215. https://doi.org/10.1111/nzg.12138

Roberts, B.R., & Stephens, M. (Eds.) (2017). *Archipelagic American studies*. Durham, N.C. & London: Duke University Press. https://doi.org/10.1215/9780822373209

References in Korean
程俊. (2006). 중국의 마조(馬祖)신앙과 관음신앙. 도서문화, 27, 100-112.
허남춘. (1994). 삼성신화(三姓神話)의 신화학적(神話學的) 고찰(考察). 탐라문화, 14.
허남춘. (2007). 설문대할망과 제주신화. 서울, 한국: 민속원.
허남춘. (2011). 제주도 본풀이와 주변 신화. 경기, 대한민국: 보고사.
허춘. (1994). '三姓神話' 연구. 탐라문화, 14.
현용준. (1983). 三姓神話 硏究. 탐라문화, 2.
현용준. (2002). 濟州道 巫俗과 그 周邊. 서울, 대한민국: 집문당.
장주근. (1986). 제주도 당신신화의 구조와 의미. 국어국문학, 22.
진성기. (1993). 제주도 전설. 서울, 대한민국: 백록.
주강현. (2006). 동아세아(東亞細亞)의 해양신앙(海洋信仰). 도서문화, 27, 1-46.
강정식. (2005, 11). 韓國 濟州道의 海洋信仰. 東亞細亞의 海洋信仰과 '海神' 張保皐 (p.5). 도서문화연구원, 목포대학교. 대한민국: 國立海洋物展示館.
김헌선. (2005). 제주도 당본풀이의 계보 구성과 지역적 정체성 연구. 비교민속학, 29.
金英珠. (2014). 中世のヒルコ伝承 : 神道集"を中心に. 일어일문학연구, 90(2), 69-87.
김용안. (2009). 키워드로 여는 일본의 향. 서울, 대한민국: 제이앤씨.
김용의. (2012). 오키나와 야에야마(八重山) 지역의 낙원전설, 일어일문학연구, 80(2), 239-254.
권태효. (2005). 한국 구전신화의 세계. 경기, 대한민국: 지식산업사.
이경엽. (2007). 주산군도 하치도(蝦峙島) 사람들의 신앙과 의례생활. 도서문화, 29, 139-192.
李元鎭. (2002). 耽羅誌 (a copy of translation with note).(김찬흡, 고창석, 김혜우, 김상옥, 조성윤, 강창룡, 오창명, 오수정, Trans.). 서울, 대한민국: 푸른역사. (Original work published in 1653)
朴貞淑. (2012). 문헌자료를 통해 다시 살펴 본 中國의 海神 '馬祖'의 原型과 그 變貌. 중국어문학논집, 77, 567-590.
曲金良. (2007). 주산군도(舟山群島) 하치도(蝦峙島)의 신앙민속. 도서문화, 29, 4-40.
송화섭. (2010). 동아시아 해양신앙과 제주도의 영등할망, 선문대할망. 탐라문화, 37, 183-222.
高梨一美.,&이혜연. (2004). 풍요는 바다로부터 온다: 류큐 열도의 풍요(유우)와 타계 관념. 도서문화, 23, 397-409.

References in Chinese
金涛. (2012). 舟山群岛海洋文化概论. 杭州, 中國: 杭州出版社.

References in Japanese
比嘉政夫. (1993). 海洋文化論. 東京, 日本: 凱風社.
高橋亨. (1974). 濟州島の民謠. 서울, 대한민국: 寶蓮閣.
柳田國男. (1940). 海南小記. 東京, 日本: 創元社.

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The influence of the Kuroshio Current on place naming on Green Island, Taiwan

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ABSTRACT: Green Island off the southeast coast of Taiwan is located along the Kuroshio Current in the western Pacific Ocean. Before the end of Second World War, a variety of place names for Green Island in different languages implied a connection to the Kuroshio Current. These names include exonyms such as Sanasana, Tabaco Migúel, Hóe-sio-tó, and Bonfire, which refer to maritime migration from southern ancestral homelands, the Catholic traffic between Japan and the Spanish Philippines, and shipwreck survivors respectively. Although the name Green Island has been commonly used since 1949 and no longer bears connection to the Kuroshio Current, some eponymous topographic names on the island and adjacent marine toponyms still refer specifically to oceanic flow. These toponyms include coastal place names associated with local memory of major international shipwrecks since the 20th century and fisheries created by the Kuroshio Current.

Keywords: Green Island, Kuroshio Current, marine environment, Taiwan, toponyms.

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Introduction

Islotoponomastics, or the study of place-naming on islands, is among the many approaches to the study of islands. The term *toponymic ethnography* has thus been proposed to encapsulate the relationship between toponyms, linguistics, and broader cultural and ecological contexts for the understanding of linguistic, cultural, and ecological relationships between people and place (Nash, 2015, p. 147). In terms of islanders or island toponyms in particular, the most salient relationship between people and place in the context of place-naming is arguably the link between humans and the marine environment. Island toponyms applied to areas such as fishing grounds, as well as to the local topography, best illustrate this point. Nevertheless, oceanic currents, one of the fundamental physical elements that constitute the marine environment around any island, may not be properly or directly represented in island toponyms. This is because the toponyms associated with oceanic currents are not always transparent in their meaning, but are instead opaque, with meanings and etymologies that are hidden within their cultural and historical contexts, since not all such naming is assigned according to its lexical connotation (Radding & Wester, 2010, pp. 395-396).

The current paper will take the Kuroshio Current and the place-naming on Green Island (Taiwan) as a case through which to explore the island toponyms that conceal the relationship between oceanic currents and toponyms per se. In doing so, we will look at not only at the eponymous toponyms used by the islanders but also those nomenclatures left behind by the passing sea navigators in the past. The taxonomy of toponymic research based on island environments could be classified into sea-based vs. terrestrial instances on the primary level; the former is represented by fishing grounds, and the latter is further subdivided

into topographical features, houses, and roads (Nash, 2015, pp. 151-153). This paper will examine the eponymous toponyms in fishing grounds and topographical categories. For the historical nomenclatures left by passing navigators, we will consider the various place names for Green Island as a whole. In other words, this paper will explore the different toponyms, including exonyms and endonyms, for Green Island, as well as eponymous toponyms used on Green Island, to illustrate their hidden connections to the Kuroshio Current.

Geography and the naming of Green Island

Green Island (*Lǜ dǎo* 綠島 in Mandarin Chinese), located approximately 33 km off the southeast coast of Taiwan, is an island along the Kuroshio Current in the western Pacific Ocean. The island is composed of volcanic andesite and encompasses an area of 15 km^2. The local residents currently inhabiting the island are descendants of the Hokkien, a *Tâi-gí* or Taiwanese-speaking population originally from the southwest coast of Taiwan.

Approximately 43 km south of Green Island is Orchid Island 蘭嶼, where the local Austronesian population calls themselves the *Yami* people or the *Tao* people. The name *Yami*, meaning *North*, is an ethnonym given by those living farther south, namely, the people of the Batan Archipelago in the Philippines. Orchid Island is situated approximately 100 km from the northernmost island of the Batan Archipelago, Mavudis Island. Interestingly, the Yami/Tao people and the Batanese share linguistic similarities and traded weapons, gold, and domesticated animals such as goats and pigs until approximately 300 years ago, when war broke out between them. Green Island was considered a colony of the Yami/Tao people before the Hokkien-speaking people arrived. Northeast of Green Island are the Yaeyama Islands 八重山諸島, the southernmost part of the Ryūkyū 琉球 Archipelago in Japan. The distance between Green Island and the closest island within the Yaeyama Islands, Hateruma 波照間島, is approximately 280 km. There is no apparent evidence linking the people in the Yaeyama Islands to the Yami/Tao people.

Green Island acquired its current name after World War Two, when Taiwan, as well as Green Island, was occupied by the Chinese Nationalist Force, which represented the victorious Allied forces in receiving the official surrender of Japanese forces. American forces played this role in other places along the Kuroshio Current, such as the southern part of the Korean Peninsula, the Ryūkyū Islands, and the Philippines. Approximately four years after the end of the war, on 1 August 1949, Huang Shih-hung 黃式鴻, the magistrate of Taitung (the county in mainland Taiwan that administers Green Island), decreed the renaming of the island as Green Island, a calque of the island's new Chinese name, *Lǜ dǎo* 綠島. The renaming was believed to overturn the image brought by its original name, *Fire-Burnt Island*, and replace it with that of a *green*, fertile island. Even though the renaming was aimed at creating a relatively brighter and more luminous image for the island, ironically, Green Island was utilized as a place of exile for political prisoners jailed by the Chinese nationalists from the late 1940s until the lifting of martial law in 1989. The name *Green Island* continues to be utilized today.

As matter of fact, in addition to 'Fire-Burnt Island', there are several exonyms for Green Island found in history, and some of them possess elements that reveal a concealed connection with the Kuroshio Current. The literal meanings of these exonyms include 'coconut trees', 'Tobacco Michael', and 'bonfire'.

Coconut Trees: the Austronesian migratory route and ancestral homeland

The Formosan Austronesians in eastern Taiwan referred to Green Island as *Sanasana* or *Sanasai*, which means 'coconut trees'. *Sanasai* was recorded as the name for Green Island in the early-20th century by Japanese scholars, including Inō Kanori 伊能嘉矩 (1867-1925), Utsurikawa Nenozo 移川子之藏 (1884 – 1947), and Mabuchi Tōichi 馬淵東一 (1909-

1988) when they collected the legends, folktales, histories, and genealogies of the Formosan Austronesians. *Sanasai* as an island name is mentioned as a stopover in legends concerning the maritime migrations of various Formosan Austronesian ethno-linguistic communities such as the Basay (Basai), the Kavalan (Kebalan), the Amis/Pangcah, and the Puyuma (Pinuyumayan), from their ancestral homeland south of Taiwan. The Austronesian settlements or communities (listed here from south to north) of Arapanai, Kasasikran, Tsipo, Tsikuliean, Takilis, Linau Qauqaut, Torobiawan, and Basai (see Figure 1), are documented to have shared the memory of *Sanasai* in various legends (Ferrell, 1969, p. 53; 詹素娟, 1998, pp. 37-45). These Formosan Austronesian communities are thought to be closely related to the Polynesians or other Pacific islanders because of shared cultural elements such as the matrilineal and matrilocal socio-cultural groupings, ornaments, cosmographic myths and overseas origins. It is believed that the Formosan Austronesians in eastern Taiwan migrated from the Pacific or insular Southeast Asia to Taiwan within the past 3,000 years (Ferrell, 1969, pp. 51-58).

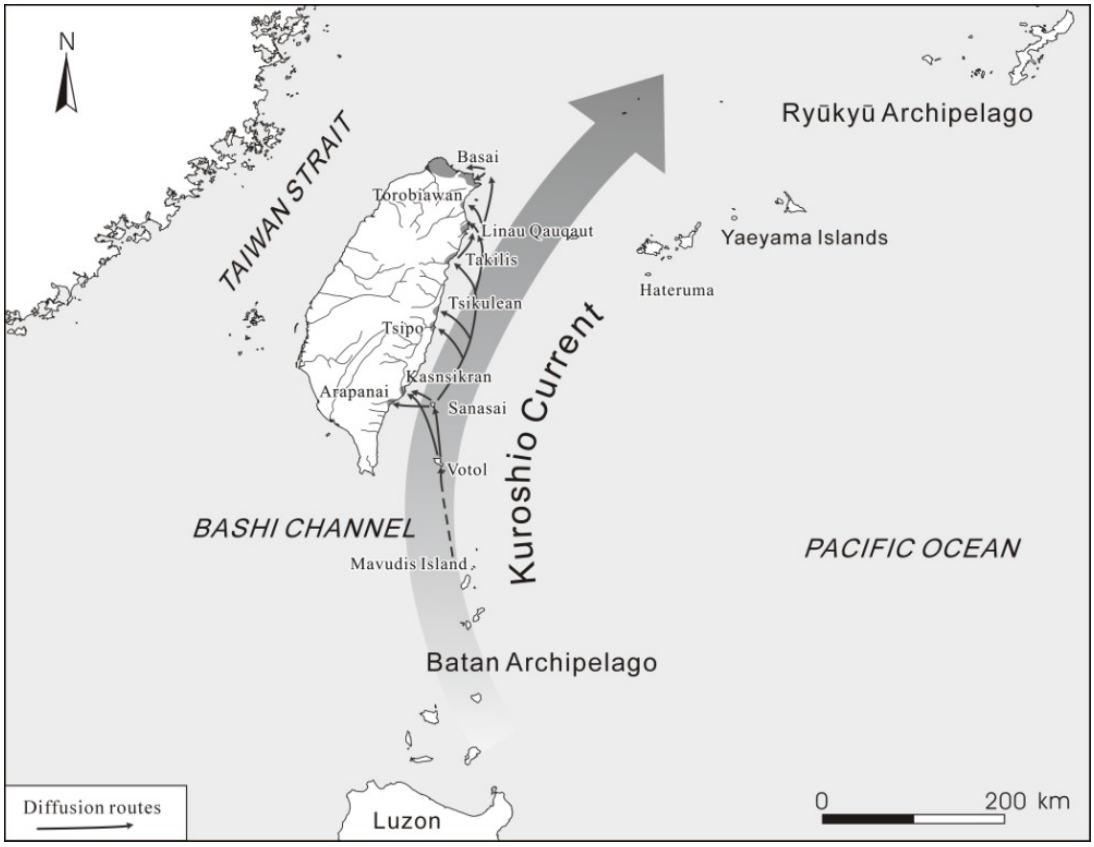

Figure 1: Green Island as Sanasai (© Peter Kang, 2018)

The geographical distribution of the *Sanasai* legend primarily follows the northward Kuroshio Current because the human carriers of the legend sailed northward along the eastern coast of Taiwan. Both the place name itself and the people who own the memory of the legend describe the location of Green Island and its relation to the Kuroshio Current. In other words, by naming the island *Sanasana*, the Formosan Austronesians in eastern Taiwan were reminding themselves both of their ancestral homeland farther south and their maritime migration through the northward Kuroshio Current.

Japanese Catholics? The Early Modern European arrivals

Following the lucrative spice trade, European merchant sailors arrived in East Asia in the 16th century. The Spanish took Manila in the Philippines as a base for interregional maritime

trading routes that would eventually connect to the Iberian Peninsula in Europe by way of Acapulco in Mexico. The sea route via the Ryūkyū Islands and Taiwan was used by Japanese Catholics and merchants to facilitate communication between Luzon in the Philippines, and Kyūshū 九州 in Japan. The trip took approximately one month, depending on the currents and wind; however, when sailing from Luzon to Kyūshū, sailors incurred a benefit from the Kuroshio Current (Iaccarino, 2016, p. 6).

The sailors who traveled between Luzon and Kyūshū along the Kuroshio Current called Green Island Tabaco Migúel in addition to the native name *Sansana*, which is a variation of *Sanasana* or *Sanasai*. The actual reason or the inclusion of the name *Migúel* for Green Island is presently unknown. It might relate to the spread of Catholic beliefs since *Migúel* is the namesake of the Catholic Archangel Michael. As for the word Tabaco, it was related to nearby Orchid Island. Orchid Island and the uninhabited volcanic islet to its southeast were called *Big Tabaco* and *Small Tabaco* respectively. Nevertheless, the name *Tabaco Migúel* did not appear on the same map with *Big Tabaco* and Small *Tabaco* but rather appeared with *Bottel Tabakoxima* for Orchid Island on the maps highlighting the sea route between Japan and the Philippines (Gommans & van Dissen, 2010, pp. 242-244). *Xima* is spelled *shima* in modern Japanese, meaning *island*. Thus, this name suggests that the place-naming on European maps was provided by someone associated with the Japanese language. *Bottel Tabako* is a variation of *Botel Tobago*, a name widely used on maps for Orchid Island until the 20th century. Therefore, there is little doubt that the names *Tabaco Migúel* and *Bottel Tabakoxima* were given by those who extensively utilized the Kuroshio Current to sail between Luzon and Kyūshū (see Figure 2). In other words, the exonyms used by sailors to christen the island disclose the history of those involved in the spreading of Catholicism along the path of the Kuroshio Current, as well as their use of the island for navigation.

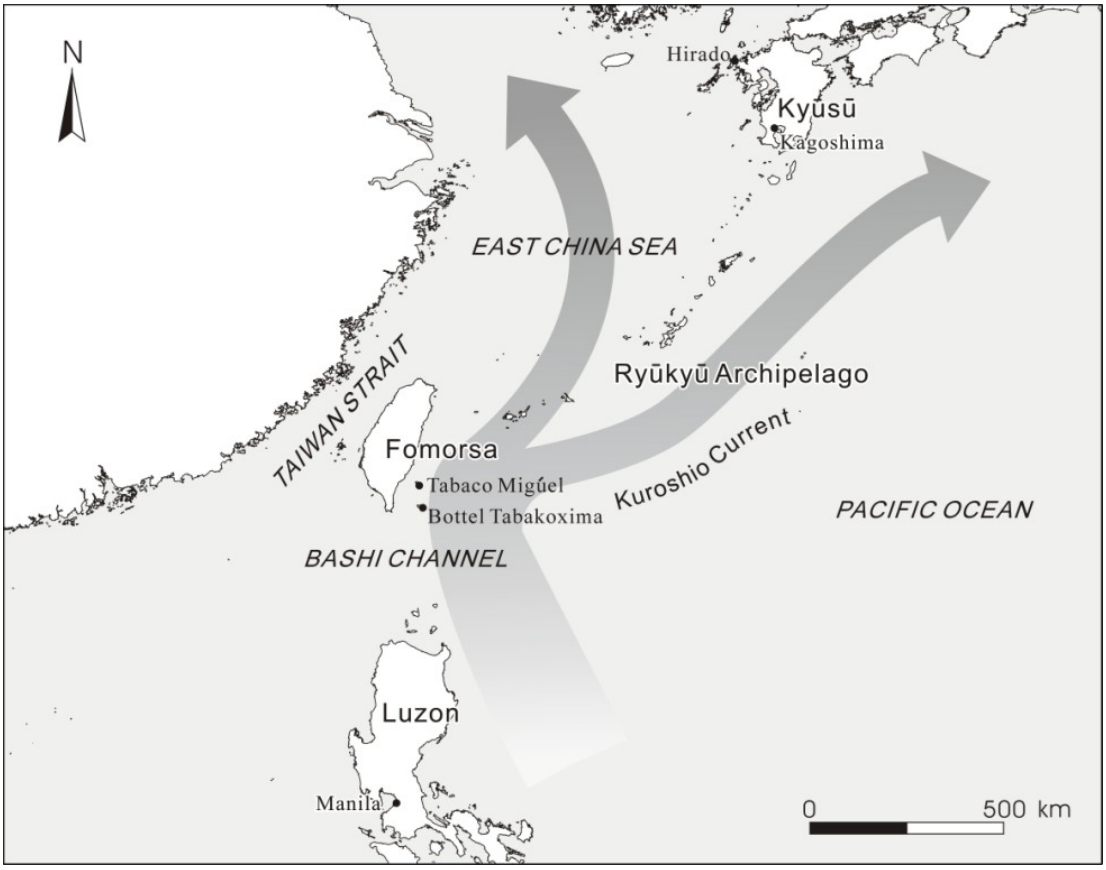

Figure 2: Green Island as *Tabaco Migúel*. (© Peter Kang, 2018)

The Dutch were late-comers to this region during Early Modern maritime navigation. Nevertheless, the Dutch East India Company (*Vereenigde Oostindische Compagnie*) successfully established a factory on the southwestern coast of Taiwan in 1624. From there, the Dutch gradually dominated the political economy in the lowland areas of Taiwan. Green Island was initially marked as Mauritius Island on Dutch maps.

The first island-wide map of Taiwan by Jacobs Noordeloos in 1625 after a navigation survey, *Packan alsoo 'tselve beseijlt is door Jacob Noordeloos*, noted *I. Maurysy* for Green Island (Gommans & van Dissen, 2010, p. 211). The name was also used later by Jan van Braam in his *Map of the Island Formosa and the Islands of the Pescadores* (*Kaart van het Eylandt Formosa en de Eylanden Piscadores*) as *Eyl. Moaritius* (Vertente et al., 1991, pp. 128-129). The name probably commemorated the company's sailing vessel that first reached the western coast of Australia in 1618. Nevertheless, not only in cartographic works but also in the everyday speech of employees, there was a gradual shift to native names such as *Sanna Sanna* or *Sansana* when referring to Green Island. For instance, Map of Chinese coast along the Provinces Canton and Hokkien, also the Island of Formosa (*Pas-kaart van de Chineesche kust, langs de Provincien Quantung en Fokien als ook het Eyland Formosa*) by Johannes van Keulen noted *Sanna Sanna* (Vertente et al., 1991, pp. 92-93). Johannes Vingboons in his *Map of one part of Chinese Sea and Coast, from Punta Lampa cao to the Overveen Islands, and Island Formosa etc.* (*Kaart van een gedeelte der Chineese Zee en Kust, van Punta Lampa cao tot de Overveens Eilanden, het Eiland Formosa enz. Hierop komt mede voor: de rivier van Canton, van den mond tot Fangsucis*) used the name *Sansana* (Schilder et al., 2006, pp. 252-253). For the contemporary usage of the native name for Green Island left by the company employees, please see the cases in *De Dagregisters van het Kasteel Zeelandia, Taiwan*, which left the records of *Sanna Sanna* (*Samma Samma*) in the years of 1643 and 1655 (Blussé et al., 1995, p. 134; Blussé et al., 1996, p. 501).

Shipwreck survivors calling for rescue: Bonfire Island

The Manchu Empire conquered China in the mid-17th century and later expanded its imperial control to the lowland areas of Taiwan in the late-17th century. The eastern part of Taiwan, being separated by the Central Mountain Range, was not under imperial control, nor was Green Island, until the late-19th century.

Green Island was noted by chorography and cartographical works of the Manchu Empire in the 19th century as *Huǒshāo Yǔ* 火燒嶼, meaning *Fire-Burnt Island*. Examples include the maps *Táiwān qiánhòu shān Yútú* 臺灣前後山輿圖 (1878) and *Táiwān qiánhòu shān quán tú* 臺灣前後山全圖 (1880). *Huoshao Yu* is the literal translation of *Hóe-sio-tó* 火燒島, a name given by Hokkien-speaking fishers and traders who passed the island in their travels and a number of whom ultimately settled on the island. The date of the earliest arrival of Hokkien-speaking people on Green Island is unknown to us. The Dutch East India Company logged an observation of possible human activity on the island in the year of 1655 by noting catching sight of a bonfire. The Dutch suspected that this was evidence of Hokkien traders who used the island as a stopover to St. Laurens (today's *So-ò* 蘇澳) on the northeastern coast of Taiwan (Blussé et al., 1996, p. 501).

The *Fire-Burnt Island* toponym was once said to represent a rapid change in the island's ecology in the 19th century after the arrival of the Hokkien-speaking population, whose logging industry caused the deforestation of Green Island. Nevertheless, some argue that the name was derived from cases of shipwrecked crew members who set fires to call for rescue. The strength of the Kuroshio Current increases rapidly between Green Island and mainland Taiwan, which has occasioned numerous sailing accidents (李玉芬, 2014, pp. 140-141, pp. 148-149, p. 148n34). Contemporary Europeans commonly recorded the name *Bonfire Island*, which is another literal translation of *Hóe-sio-tó*, in addition to the old Austronesian name,

Sanasana, in their cartographic works and navigation logs. *Sanasana* might be spelled *Samasana* or *Samasand* and was in fact more widely used than *Bonfire* by the Europeans. For instance, in his article, William Campbell used the term *Samasana* (Campbell, 1896, p. 387), whereas John D. Clark marked Green Island as *Samasand* (Clark, 1896, p. 100). In contrast, the Austronesian name is completely absent in the records of the Manchu Empire.

The Japanese Empire took over Taiwan, including Green Island, after defeating the Manchu Empire in 1895. Since then, Green Island has been labeled *Kashō-tō* 火燒島 after the calque *Hóe-sio-tó*. All the names in different languages bearing the meaning *Fire-Burnt Island* or *Bonfire Island* were also used until the disintegration of the Japanese Empire following Second World War.

In terms of our interest in the connection between the naming of the island and the Kuroshio Current, the exonym *Hóe-sio-tó*, as well as its contemporary equivalent translations (*Huǒshāo Yǔ* in Mandarin, *Bonfire Island* in English, and *Kashō-tō* in Japanese) reflects how the Hokkien-speaking seafarers perceived the island as a place of numerous shipwrecks that were caused by the sudden increase in the strength of the Kuroshio Current.

Table 1: Place names for Green Island and their connection to the Kuroshio Current.

Place Names	Language	Connection
Sanasana	Formosan Austronesian	Stopover during maritime migration
Tabaco Migúel	Spanish	Catholic traffic between Japan and Spanish Philippines
Hóe-sio-tó	Hokkien	Shipwreck survivors
Bonfire	English	Shipwreck survivors

Place names and marine toponyms on Green Island

In addition to the exonyms of the island itself, several topographic names and marine toponyms on Green Island given by the local Hokkien-speaking fishermen dwelling on the island can be traced back to the influence of the Kuroshio Current. The topographic names on land are predominantly associated with major international shipwreck incidents, whereas the associated marine toponyms are mostly related to the fisheries with ties to the abundant migratory fish stocks carried by the Kuroshio Current (see Figures 3 and 4).

O͘-hî-khut 烏魚窟, or *Den of Mullets*, on the northern coast of Green Island refers to a sandy beach that periodically turned into a small lagoon at low tide. The place name itself indicates that mullets would be found in the lagoon. On 11 December 1937, the SS *President Hoover* hit a nearby reef *en route* from Kobe to Manila and subsequently sank. The spilled oil filled the lagoon, turning it into a pool of greasy dirt. The islanders immediately renamed the sporadic lagoon *O͘-iû-khut* 烏油窟, or *Den of Tarnished Oil* (趙仁方&林登榮, 2014, p. 201). The change of topographic names by local residents was facilitated by the close similarity in pronunciation of the two place names in Hokkien (i.e., *O͘-hî-khut* vs. *O͘-iû-khut*), thereby making the colloquial transition from mullets to tarnished oil relatively simple for locals even though the connotations of the two place names are quite different.

Two place names on the southern coast of Green Island are connected to shipwreck incidents, namely, *Kòng-phòa-hoan-chûn* 摃破番船 (*Fracturing of Foreign Vessels*) and *Hoan-chûn-phī*^{n} 番船鼻 (*Nose of Foreign Vessels*). The term *phī*^{n}, literally translated as nose, is widely used as an anthropomorphic metaphor in Hokkien to refer to a cape in coastal geomorphology. In addition, islanders dubbed a reef near *Hoan-chûn-phī*^{n} *Hoan-chûn-phī*^{n} *pàng-chiáu-sái-ta* 番船鼻放鳥屎礁 (*Reef of Bird Excrement Dropped from the Nose of Foreign Vessel*), to commemorate the 1992 sinking of the Greek cargo ship *Pegasus* (趙仁方&林登榮, 2014, p. 224, p. 237).

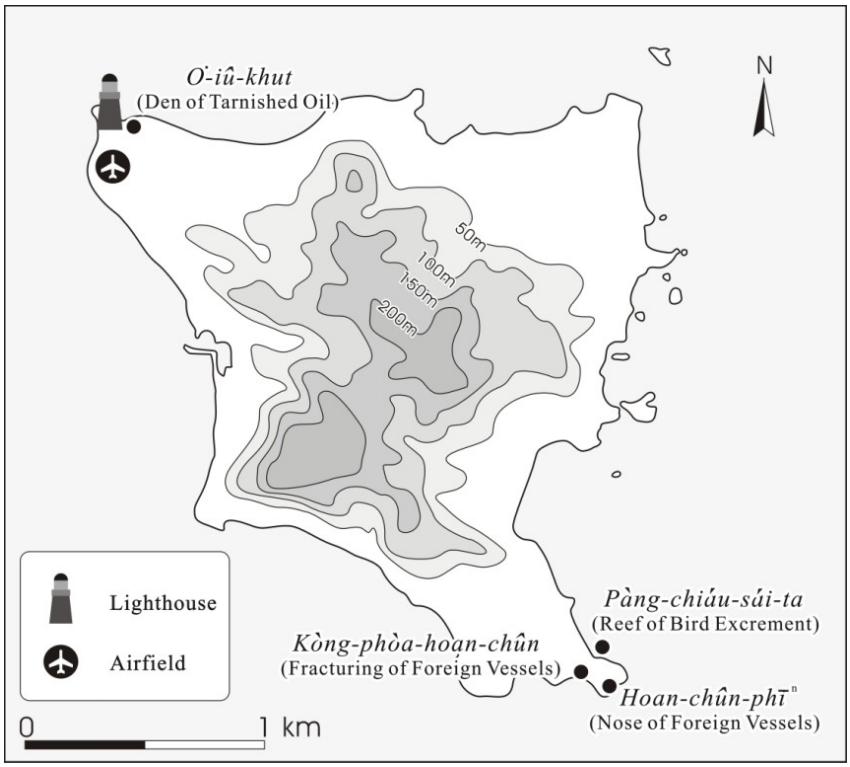

Figure 3: Place names related to shipwrecks. (© Peter Kang, 2018)

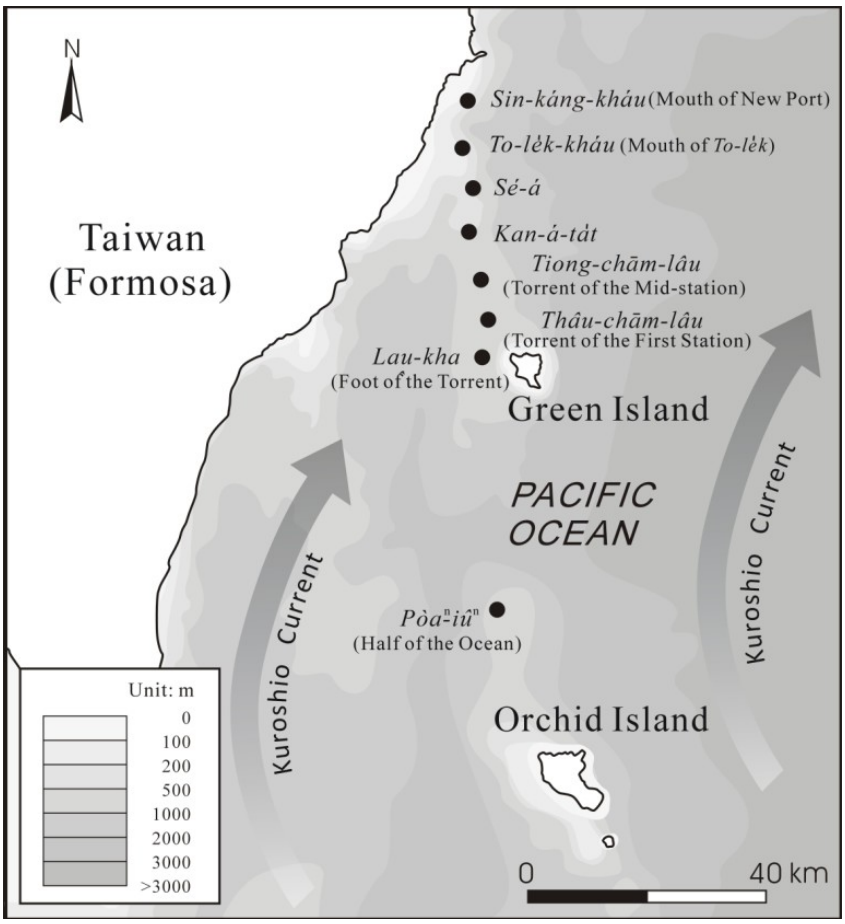

Figure 4: Marine toponyms related to fisheries. (© Peter Kang, 2018)

The Kuroshio Current runs at different speeds on either side of Green Island. The flow on the west side runs faster than that on the east. As a result, it has earned the name *Thàu-lâu* 透流 (*Riptide*) among local fishermen. *Thàu-lâu* was also called *Lâu-kha* 流腳 (*The Foot of a Torrent*), which fishermen identify as one of Green Island's in-shore fisheries. As the Kuroshio Current runs northward, the local fishermen named the riptide off the southwestern coast of Green Island *Lâu-thâu* 流頭 (*The Head of a Torrent*) and that off the northwestern coast *Lâu-bé* 流尾 (*The Tail of a Torrent*). In other words, islanders use head and tail metaphors to designate the direction of the current in their place-naming, while foot refers to fishing ground (趙仁方&林登榮, 2014, p. 239).

Starting from *Lâu-kha* fishery, local fishermen name the fishing grounds going northwestward from Green Island to mainland Taiwan *Thâu-chām-lâu* 頭站流 (*The Torrent of the First Station*), *Tiong-chām-lâu* 中站流 (*The Torrent of the Mid-Station*), *Kan-á-taʻ* 矸仔達 (*Corkscrew*), *Sé-á* 洗仔, *To-leʻk-kháu* 都歷口 (*The Mouth of To-leʻk*), and *Sin-káng-kháu* 新港口 (*The Mouth of New Port*). The two fisheries closest to Green Island are named after the riptide, as in the case of *Lâu-kha*, and the two fisheries closest to Taiwan are named after adjacent places on the mainland. In addition, halfway between Green Island and Orchid Island is the fishery named *Pòaⁿ-iûⁿ* 半洋 (*Half of the Ocean*). All these fisheries are located above a bulge in the seabed terrain, where the northward Kuroshio Current is disturbed and brings shoals of fish (趙仁方&林登榮, 2014, pp. 239-230).

Table 2: Place names around and on Green Island and their connection to the Kuroshio Current.

Place Name	English Equivalent	Connection
O͘-iû-khut	*Den of Tarnished Oil*	Major international shipwreck
Kòng-phòa-hoan-chûn	*Fracturing of Foreign Vessels*	Major international shipwreck
Hoan-chûn-phīⁿ	*Nose (Cape) of Foreign Vessels*	Major international shipwreck
Lâu-kha	*Foot of a Torrent*	Fishery
Thâu-chām-lâu	*Torrent of the First Station*	Fishery
Tiong-chām-lâu	*Torrent of the Mid-station*	Fishery
Kan-á-taʻ	*Corkscrew*	Fishery
Sé-á		Fishery
To-leʻk-kháu	*Mouth of To-leʻk*	Fishery
Sin-káng-kháu	*Mouth of New Port*	Fishery
Pòaⁿ-iûⁿ	*Half of the Ocean*	Fishery

Conclusion

Prior to the end of Second World War, four exonyms for Green Island implied its connection to the Kuroshio Current: *Sanasana*, *Tabaco Migúel*, *Hóe-sio-tó*, and *Bonfire*. The last one is the literal translation of the third exonym, while the first of these refers to the maritime migration of the Formosan Austronesians to eastern Taiwan from their southern ancestral homelands along the path of the Kuroshio Current. The designation used in the Formosan Austronesian languages bears the memory of these people's history. The second denotes the Catholic traffic along the path of the Kuroshio Current between Japan's Kyūshū and Luzon in the Spanish Philippines during the late-16th and early-17th centuries. The Spanish-language designation illustrates the religious ambitions of the once-formidable Iberian Empire. The final two exonyms refer to shipwreck survivors calling for rescue, and the appellation reveals the danger perceived by Hokkien seafarers.

Although the exonym *Green Island* has been in use since 1949, it bears no connection to the Kuroshio Current. Nevertheless, some place names on the island and nearby marine

toponyms given by the Hokkien-speaking islanders still demonstrate the influence of the oceanic flow. The topographic names along the coast, where the current is strong, are associated with the local inhabitants' memories of major foreign shipwrecks that have occurred since the 20th century. Interestingly, all the eponymous toponyms on Green Island and the exonym for Green Island in Hokkien reference shipwrecks. They recollect either the wrecks themselves or survivors of shipwrecks. This points to the Hokkien-speaking people's perception of the marine environment created by the Kuroshio Current.

However, not all the eponymous toponyms in Hokkien bearing a connection to the Kuroshio Current around Green Island demonstrate this fearful attitude toward the sea. In fact, the eponymous marine toponyms are mostly based on the fisheries created by the Kuroshio Current. These names for fishing grounds near Green Island are descriptive in nature and denote the direction of ocean currents (e.g. *Foot of a Torrent*), as well as their sequential order in terms of distance within the island-centric perspective (e.g. *Torrent of the First Station*, *Torrent of the Mid-Station*, *Half of the Ocean*). The fisheries situated far from the island and near mainland Taiwan were named after known land marks, such as adjacent place names (e.g. *Mouth of To-le̍k*, *Mouth of New Port*). The hydronyms of relatively smaller fishing grounds located near the shore and named by various individual islanders are mostly transient (Nash, 2012, pp. 76-77, p. 80). Their ephemerality is primarily due to changes in terrestrial markers or fish movements and clustering patterns (Nash, 2015, pp. 152-153). In contrast, the stability of the Kuroshio Current and toponymic markers contribute to the persistence of major fishing ground names around Green Island.

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References (English)

Blussé, L., Milde, W.E., & Ts'ao Yung-ho (Eds.). (1996). *De Dagregisters van het Kasteel Zeelandia, Taiwan, deel III, 1648-1655*. Gravenhage: M. Nijhoff.

Blussé, L., Milde, W.E., & Ts'ao Yung-ho (Eds.) (1995). *De Dagregisters van het Kasteel Zeelandia, Taiwan, deel II, 1641-1648*. Gravenhage: M. Nijhoff.

Campbell, W. (1896) The island of Formosa: its past and future. *Scottish Geographical Magazine*, 12(8), 385–399. https://doi.org/10.1080/00369229608732903

Clark, J.D. (1896) *Formosa*. Shanghai: Shanghai Mercury Office.

Ferrell, R. (1969). *Taiwan Aboriginal groups: problems in cultural and linguistic classification*. Nankang: Academia Sinica.

Gommans, J.J.L., & van Dissen, J.R. (2010). *Grote Atlas van de Verenigde Oost-Indische Compagnie, deel VII: Oost-Azië, Birma tot Japan & Supplement*. Voorburg: Asia Maior.

Iaccarino, U. (2016) Sangleys, Japones, and Casados: an overview on the actors of the Sino-Japanese trade in the Philippines between the 16th and 17th centuries. Paper presented at Academia Sinica conference, 20 June, Taipei, Taiwan.

Nash, J. (2015). Island placenaming and insular toponymies. *Names*, 63(3), 146-157. https://doi.org/10.1080/03721426.2012.10887165

Nash, J. (2012). An insular toponymy: place-naming on Dudley Peninsula, Kangaroo Island. *Transactions of the Royal Society of South Australia*, 136(2), 67-98. https://doi.org/10.1080/03721426.2012.10887165

Radding, L., & Western, J. (2010). What's in a name? Linguistics, geography, and toponyms. *The Geographical Review*, 100(3), 394-412. https://doi.org/10.1111/j.1931-0846.2010.00043.x

Schilder, G., Moerman, J., Ormeling, F., van den Brink, P., & Ferwerda, H. (2006). *Grote Atlas van de Verenigde Oost-Indische Compagnie, deel I*. Voorburg: Asia Maior.

Vertente, C., Hsu Hsueh-chi, & Wu Mi-ch'a (1991) *The authentic story of Taiwan: an illustrated history, based on ancient maps, manuscripts and prints*. Knokke: Mappamund.

References (Chinese)

李玉芬.第二章: 清代的入墾. 臺東縣綠島鄉誌. 臺東: 綠島鄉鄉公所, 2014, 140-249.

詹素娟. Sanasai 傳說圈的族群歷史圖像. 平埔族群的區域研究論文集. 南投: 臺灣省文獻委員會, 1998, 29-59.

趙仁方, 林登榮. 第三篇: 地名篇. 臺東縣綠島鄉誌. 臺東: 綠島鄉鄉公所, 2014, 180-241.

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Pork food culture and sustainability on islands along the Kuroshio Current: resource circulation and ecological communities on Okinawa and Jeju

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ABSTRACT: This paper investigates the formation of ecologically sustainable food systems based on pork on the islands of Okinawa and Jeju, which are located along the Kuroshio Current. Observation and interview data were informed by literature on human geography. The results demonstrated that pig-breeding space (pigsty) is key to a resource circulation system that is common to both. Other elements in the system include processes involving the butchering and distribution of pigs and a fair division of labour. This study shows a homogeneous resource circulation system through pig breeding and a pork food culture that played an important role in the formation of ecological communities on the islands of Okinawa and Jeju.

Keywords: ecological communities, islands, Jeju, Kuroshio Current, Okinawa, pork, resource circulation, sustainability

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Introduction

In light of warnings regarding threats to the sustainability of island life in the 21st century, it is useful to analyse traditional food cultures in island communities along the Kuroshio Current. Communities in a similar geographic and climatic region tend to share similar ecological cultures. For example, island communities along the Kuroshio Current commonly have adapted to poor soils and harsh weather conditions such as high humidity and storms (See Youn, 2017). The pork food culture found in these island communities is among the most ecologically and culturally sustainable aspects of their existence and are the focus of the present study.

Archaeological studies suggest that wild pigs were domesticated around 6,000-10,000 BC (정연학, 2008). Island communities in Luzon, Taiwan, Okinawa, and Jeju, which are all located along the Kuroshio Current, have achieved a form of ecological sustainability through a pork food culture. An investigation of this pork food culture is thus important for identifying a common maritime culture along the Kuroshio Current. This investigation could also have implications for future sustainable island life.

The Okinawa-Jeju region shares common extreme environmental conditions, such as infertile soil (basalt and limestone soils), a warm and humid climate throughout the year, and frequent typhoons, resulting in low crop productivity and absolute food shortage. In such

conditions, an ecologically sustainable food system based on pork is understandable. This food culture both affected and was affected by the development of a system of social and economic resource circulation, which established these island communities as 'ecological communities' characterized by a fair division of labour and a sense of community solidarity. The islands' pork food culture is comprised of a range of practices, including the daily work of pig breeding, the butchering of pigs, the distribution of pork, and religious rituals. Comparisons between the pork food culture on Okinawa and Jeju suggest apparent cultural interactions between these islands.

This study undertakes a comparative analysis of how pork food culture influenced the growth of eco-communities on Okinawa and Jeju. In so doing, we aim to identify the ecological characteristics of the maritime culture on Okinawa and Jeju.

Theories of ecology and sustainability

This study takes and ecological perspective. The term 'ecology' was coined by the German zoologist, Ernst Haeckel, in 1866 (Stauffer, 1957). Haeckel emphasized the relationships of all animals with their organic and non-organic environments. Ultimately, ecology addresses how living organisms interact with their environments with the aim of overcoming the dichotomy between humans and nature.

The concepts of sustainability and the 'ecological community' emerged during the search for a sustainable way of life, in light of the problems of the 20th century (including population growth, food shortages, environmental pollution, and climate change) and associated social and political issues. An ecologically sustainable community is an economic and cultural community based on the fundamental principle of an ecologically sustainable life. Biological and cultural diversities are important for sustainable island life (Clark & Tsai, 2009). Oceanic islands can thus in some senses serve as models for ecological studies (Vitousek, 2002).

Although the objectives and perspectives associated with sustainable communities are diverse, they can be broadly divided into anthropocentric and ecological perspectives. George Marsh (1864), a pioneer in ecology research, argued for anthropocentrism in his book *Man and Nature*. For example, Marsh argues that because droughts and floods are inevitable when logging trees along a river in accordance with the needs of human civilization, focus should be placed on preservation of forests and soil in their original conditions. His states that humans have a moral obligation to undertake such environmental preservation and that there are economic benefits to conserving natural ecosystems. His argument contains a notion that humans are given special duties and responsibilities to manage and restore nature. Over the intervening century and a half, ecology research has diverged from this primary focus on the needs of human civilization (공명수, 2008: 2010).

In her classic *The Land of Little Rain*, Mary Austin (1903) sought to reconceptualize 'land ethic' in a manner that recognized the beauty and value of desert regions. She noted that all things have intrinsic value and that human and non-human beings are inter-related. This perspective requires a new understanding of nature's aesthetic values, beyond its economic values. Since nature and humans, and human consciousness and the material world are not clearly distinguished, an ecological modesty, rather than a solipsistic anthropocentrism, is required. Thus, human existence is ensured when humans and nature are closely linked. Such an ecological perspective evolved into various branches: ecological romanticism, deep ecology, cultural ecofeminism, ecological rationalism, and eco-socialism. Arne Næss (2008) has argued that recognizing the unity (or inseparability) of the ego and the outside world is key to leading a life of wisdom. As such, deep ecology claims that humans have no right to interfere with the richness and diversity of life except for the natural elements that are essential to maintaining life. This is because the nature of all life forms is inherently valuable. In assessing how human behavior affects ecosystems, evaluations should take into account

various direct and indirect effects on society, economy, and culture as well as effects on the natural ecosystem. Næss' proposal has prompted considerable research on human interaction with nature, yet some ecologists reject what they regard as deep ecology's tendency toward mystical abstraction. Thus, for example, J.B. Callicott (1989) compares 'ecological egalitarianism' with 'ecological totalitarianism'. He argues that ecosystems have intrinsic values but also that human emotions and attitudes affect the ways in which ecosystems are treated. Mercer and Kelman (2012) value the accumulation of knowledge for adaptation through human interaction with the ecosystem. Imran et al. (2014) provide a basis for acknowledging that humans and the rest of the ecosystem are interdependent.

There have also been attempts to find solutions to today's problems in traditional life. Jackson and Palmer (2015) examine the structural transformation of natural and social relationships in today's neoliberal world. They call for a move away from assessing nature in terms of economic value and a shift toward rediscovering traditional knowledge that has accumulated through human adaptation to the natural environment. This is in part a reaction to ecosystem services and related approaches, which seek to emphasize the value of environmental goods for humans (e.g. Qiu et al., 2017; Polman et al., 2016). Similarly, Hong et al. (2013) note the contribution of traditional lifestyles to conservation of biodiversity by paying attention to the relationship between the biodiversity of Asian islands, traditional biocultural diversity, and traditional ecological knowledge. Some scholars have, however, been critical of the manner in which the discourse of sustainability and ecology sometimes overshadows or crowds out attention to other issues in island communities (Baldacchino, 2018; Grydehøj & Kelman, 2017; Baldacchino & Kelman, 2014), while Pugh (2018) calls for recognition of the more nuanced relationality affecting environmental processes in the Anthropocene. These various discussions are useful for examining the traditional ways of life and ecological knowledge of the peoples of Okinawa and Jeju.

We argue that the ultimate aim for a traditional island community is to create a circulation system through which the community can live safely and sustainably. 'Sustainability' generally refers to the ability to maintain a particular process or state. Sustainability as an ecological term involves an ecosystem's ability to sustain ecological functions, biodiversity, and reproduction in the future. Sustainability is being used as a generic term for many kinds of human activities today, involving human activities that are in harmony with environmental, economic, and social conditions (Miller & Spoolman, 2009; 박길용, 2009). Sustainability in this sense was popularized by the Brundtland Report of 1987, which defined sustainability as "meeting the needs of the present and future generations without constraining the possibilities of future generations" (United Nations, 1987). Since the Rio Declaration in 1992, the concept of 'sustainability' has been applied in various fields, yet its precise meaning and practice remain unclear. Although Christine and Schmidt (2012) regard 'sustainability' as a key concept for directing societal development, they note the term's abstraction and ambiguity and use a meta-approach to analyse the various discourses that make up sustainability. Their study provides a theoretical framework for understanding sustainability at various levels, including elements, principles, processes, activities, and norms that constitute sustainability. Such discussions are useful for constructing an analytical framework for the traditional pork food culture of Okinawa and Jeju and the sustainable life of the community.

The purpose of the present study is to examine how Okinawan-Jejuan pork food culture enabled the islanders to live in an ecologically sustainable way. In addition, we examine various layers of ecological and cultural characteristics in a single oceanic cultural sphere formed by the Kuroshio Current. We furthermore investigate the characteristics of island and marine culture more generally by considering the similarities and differences between Okinawa and Jeju. In this way, it is possible to uncover interrelationships between islands, as noted by Stratford et al. (2011).

The research methods used in this study involve literature research, observational research, and interviews. Literature research was conducted to identify the origins and general historical trajectories of Okinawan and Jejuan pig breeding. Observations and interviews are used to investigate Okinawan and Jejuan pork food culture and ecological life.

Several comparable categories and analytical frameworks are needed to determine whether the traditional pork food culture of Okinawa and Jeju are associated with the formation of an ecological community. Categories such as space, process, relationship, utilization, and norms are considered. Hence, we will consider: 1) the formation of a circulatory system of pig breeding and ecological space and resources, 2) the process of disassembling and distributing pork, 3) community solidarity and the resource allocation process, 4) the formation and utilization of a food circulation system through the combination of pork and other foodstuffs, and 5) how pig farming and its ritual relationship with pork food culture affects ecological norms and values.

Pigs and the environment on Okinawa and Jeju

Okinawa and Jeju are relatively remote islands in Japan (Okinawa is approximately 1,500 km from Tokyo) and Korea (Jeju is approximately 450 km from Seoul) (see Figure 2). Although their residents are of different nationalities and ethnicities, Okinawa and Jeju are both islands in the Kuroshio Current. Both islands have a subtropical climate that is hotter than their respective mainlands. Okinawa is near the southern boundary of the subtropical climate zone, whereas Jeju is close to the northern boundary of this climate. Both islands are in the path of typhoons and are characterized by windy and rainy weather. The islands are composed predominantly of basalt and limestone with numerous caves. Due to poor soil fertility and water scarcity, a limited number of grains (mainly barley, foxtail millet, and soybeans) and sweet potatoes are cultivated and used for food.

The islands have similar histories: They were once independent countries but were ultimately annexed by the governments of their respective mainlands. After losing their independence, they were given new names: Okinawa was formerly the Ryukyu Kingdom, and Jeju was formerly the Tamla Kingdom. During World War II, residents on both islands were forced to build military bases for the Japanese Imperial Army. Large portions of the populations on both islands were also slaughtered by their respective governments during the battle of Okinawa in 1945 and Jeju 4 April massacre in 1948.

Figure 1: Dung-eating pig cultural area of the Kuroshio Current. (© Hyekyung Hyun)

Figure 2: Okinawa and Jeju along the Kuroshio Current. (© Hyekyung Hyun)

In terms of food culture, both islands are known for their 'dung-eating pigs' and pork food dishes. The word for 'pig' in the local dialects is *wa* on Okinawa and *dosegi* on Jeju. There are also several local terms for pig and pork products on these islands. In addition, due to increased shipments of flour to Japan and Korea during the US military occupation just after World War II, pork noodle dishes using pork bone soup became popular on the Japanese and Korean mainlands, causing the distinct pork food culture of these islands to become more widely known.

It is possible to estimate the time when pig breeding began on Okinawa and Jeju based on documentary evidence. The records of Chinese investiture envoys from 1756 provide important information regarding food during the age of the Ryukyu Kingdom, specifically between 1534 and 1866. These documents note in 1534 that "wild boar meat is available everywhere, but poor people cannot afford it" and that pigs were presented to Chinese investiture envoys as gifts for their parties. These records indicate that pork was not available to ordinary residents on Okinawa during this period (Munetaka, 2005).

The *Annals of the Joseon Dynasty* 조선왕조실록 (a chronological record of the reign of 25 kings during Korea's medieval period) is another important source of information on pigs and pork on Okinawa. People who drifted from Korea to Okinawa (and anywhere outside of Korea) on the sea and back were routinely investigated by government officials, and the details of such investigations were recorded in the annals. The record includes Jeju fishermen who drifted to Okinawa and interacted with Okinawa's culture. For example, in the 8th year of the reign of King Sejo 세조 in 1462, it was recorded that Yang and others from Jeju said "there are no animals on Okinawa, only pigs." From this record, it could be said that pigs were already familiar to people on Okinawa. Similar statements about pig breeding were given by Kim and others. Nonetheless, it appeared that pork was not widely available until at least the 17th century. Since the 18th century, pork has been documented as the main food accompanying funerals and other important ceremonies attended by ordinary people. This finding would mean that pig farming was on the rise in the 18th century. With an increase in the cultivation of sweet potatoes (used for pig feed in the 19th and early-20th centuries), it was rare to find households on Okinawa that did not breed pigs (Munetaka, 2005).

In the case of Jeju, the *Records of the Three Kingdoms: Book of Wei Biographies of the Wuhuan, Xianbe, and Dongyi* 삼국지 위서 동이전, written in 280 AD, states that "the

people of Jooho 주호 (Jeju) are good at breeding cattle and horses." It could therefore be said that pig breeding may have started during the early Tamla Kingdom (227 BC-1402 AD) (진영일, 2008, pp. 42-43; Youn, 2017). A record of pig breeding in public institutions on Jeju can be found in Won-jin Lee's *Tamlaji* 탐라지, written in 1653 (김찬흡, 2002). During the Japanese colonial period (1910-1945), it was written that "there were few houses without pig farming" on Jeju (강동식 et al., 2009).

The relationship between sweet potatoes and pig farming on Okinawa and Jeju was very important in commercial terms, and it seems that the breeding of dung-eating pigs on Okinawa and Jeju was established to compensate for insufficient pig feed. A new type of ecologically sustainable food culture came to be established, and, in the process, the pork food culture of the islands along the Kuroshio Current zone was formed.

Breeding dung-eating pigs and the formation of an ecologically sustainable community

The pigsty: a critical space in ecologically sustainable resource circulation

In examining Okinawan-Jejuan pork food culture, space for breeding pigs is the most remarkable aspect from an ecological perspective. All spatial arrangements reflect a value system in addition to utilitarian physical considerations. Until the early 1980s, homes on Okinawa and Jeju had a separate space for housing dung-eating pigs.

The Kuroshio Current flows past the southeastern part of Jeju, the southwestern part of Kyushu, and Okinawa. In these areas, a typical private house consisted of a main building, with a kitchen, a pigsty, and a vegetable garden, all detached from the main building. Such houses are more common in the southeastern part of Jeju (in contrast to the northwestern part) (윤일이 & 尾道建二, 2010). This suggests the influence of a culture to the south that was brought northward by the Kuroshio Current. Similarly, traditional private houses on Okinawa are equipped with a separate kitchen, a pigsty, and a vegetable garden, together with the main accommodation building, called a *woohuya*.

The southern culture in question is the culture of Southeast Asia and southern China, linked by an ocean route. The function of the detached kitchen is to prevent damage caused by frequent typhoons and to keep the kitchen cooler in the hot and humid climate. The fireplace in the kitchen is worshiped (the faith of fire) and is viewed as a southern cultural element spread along the Kuroshio Current (Youn, 2017). Because the kitchen functions as a food preparation space, a work space, and a dry space, kitchens on Jeju and Okinawa are relatively large in size.

Figure 3: Pigsty latrines ('pig toilet') from Okinawa (*Huru*, left, © Sanghee Lee) and Jeju (*Tongsi*, right, © Hyekyung Hyun).

The pigsty latrine (a toilet over a pigsty, or 'pig toilet') is a southern cultural element that spread along the Kuroshio Current from the Philippines and is used to protect against

the venomous snakes common in hot regions (김광억, 1988; 장보웅, 1974, 1981). As shown in Figure 3, the external structure of the pigsty latrine (known as *huru* on Okinawa and *tongsi* on Jeju) consists of an upper part and a lower part. The upper part is the toilet, and the lower part is the pigsty. In the pigsty, the pig's activity space, house (or sleeping space), feeding space and manure space are separate. The structure, which is usually elliptical, increases hygiene and provides effective protection from snakes.

These house structures exist in areas along the Kuroshio Current (김광억, 1988; 장보웅, 1974: 1981; Youn, 2017). To date, however, the possibility that this type of private house is connected to a resource circulation system has not been analysed. These pigsty latrines are good examples of a resource circulation system when we analyse the combines functions and roles of a kitchen, a pigsty, and a vegetable garden. Vegetables produced in the garden are circulated and consumed through the kitchen, and leftover food and human feces become pig feed. In turn, the pig feces are reused as manure and become an important natural fertilizer in the vegetable garden. Thus, this type of house is useful in forming an ecological resource circulation system, and the pigsty connects the end of consumption to the production in the ecological circulation system.

According to our investigation, in 2011 and 2012, an average of over 30 types of crop were cultivated in the garden of each house (*ataiga* in the local dialect of Okinawa and *wooyoung* on Jeju) and were used to prepare over 100 distinct dishes. Chinese cabbage (*Brassica rapa*) in particular was cultivated throughout the year. The perennial green vegetables benefit from the warm and wet climate, and when combined with scarce grains, meat, and fish, they expand the otherwise meager food supply. Moreover, the formation of the garden-kitchen-pigsty resource circulation system reduces energy consumption in the ecological space.

Residents of these islands are cautious about altering the spatial structure in a way that interferes with this ecological system. The pigsty is the most important element. The people of Okinawa and Jeju believe that a deity dwells in the pigsty. On Okinawa, this deity is called *Hurunukami* ('The Deity of the Toilet'), the most prestigious among the household deities and the one who can expel evil spirits. After attending a funeral, people stop at the pigsty to expel possible evil spirits before entering their main house building. Similarly, people on Jeju believe that there is a deity named *Chikdobuin* ('The Toilet Wife'), and when a pigsty is altered carelessly, they believe that the household will face a series of unfortunate events. Thus, the existence and power of the deity of the pigsty is a cultural feature seen on multiple islands along the Kuroshio Current.

The breeding of dung-eating pigs was reported in the Philippines, Okinawa, the Korean Peninsula, and China's Shandong and Shanxi provinces in the 1940s (석주명, 1968). More recently, Nemeth (1987) reported that dung-eating pigs could be found in equatorial South Asia, Africa, Central America, and China. However, it is significant that, on Okinawa and Jeju, the pigsty is not only a place for breeding pigs but also serves as part of a system that circulates the island's resources. The pigsty also became part of a cultural system.

The division of labour in pig breeding and butchering processes

An ecological community seeks sustainability through decision-making among community members concerning resources and through the equitable division of labour and distribution involving these resources. The breeding, slaughtering, butchering, and distribution of pigs on Okinawa and Jeju affected the formation of this ecological community. Pig slaughtering and pork distribution are not practiced routinely but are instead performed in association with important personal, familial, and community ceremonies and events. The community thus recognizes the successful breeding of a pig as very important labour.

In the local division of labour, breeding pigs is the responsibility of women, whereas

slaughtering, butchering, and distributing them are the responsibilities of men. The most important concern in pig breeding is to produce fat pigs, which are regarded as one of the highest virtues for housewives. It is deemed praiseworthy for a housewife to present a well-fed pig at the funeral of a parent-in-law on Jeju because this is regarded as an expression of deep condolence (강수경, 2011). As such, it is very important for women and children to collect food scraps because pig feed is very scarce.

Distributing pork after slaughtering and butchering pigs is regarded as men's work. In particular, men are prominently involved in setting the date of slaughtering, choosing a pig for slaughter, the slaughtering itself, butchering, and distributing the pork. A butcher (called *wakurusa* on Okinawa and *youngin* on Jeju) plays the lead role in slaughtering and butchering, but men from the community generally join in this task. Sigeji (1995) comments that most Okinawan men could be regarded as a *wakurusa* on some occasions because most of Okinawa's private households engage in breeding pigs.

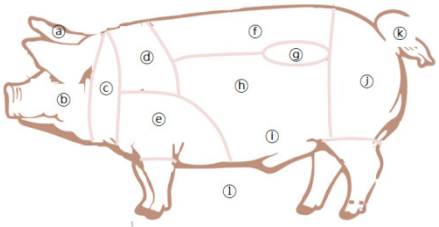
The process of slaughtering and butchering a pig is called *wakurusi* on Okinawa and *dotchuryeom* on Jeju. The slaughtering process for pigs is similar on Okinawa and Jeju, but the cuts of meats are different (Figure 4). The slaughtering is performed as follows: When a pig is chosen for slaughter, the slaughtering and butchering are performed with the participation of village residents and relatives. For several days before the slaughter, the pig is prevented from consuming human feces. Food is limited to sweet potatoes or is withheld to clear the pig's gut. On the day before or the day of the slaughter, the pig is tied up and taken out of the pigsty. Rags are inserted into the pig's mouth, and the mouth is tied tightly so that no cries can be heard. The pig is either hung from a tree for a day to slowly strangle or is throttled to death with wire. The blood is removed before the butchering. The pig is stripped of hair using fire and knives prior to butchering.

The butchering is performed where water is close at hand because a considerable quantity of water is used. Therefore, the butchering is often performed near a beach. The butchering process can be divided into approximately five steps: the removal of hair, blood, internal organs, bone, and meat (including fat). As the butchering process is a community effort, the pig's hair is sold to raise community funds.

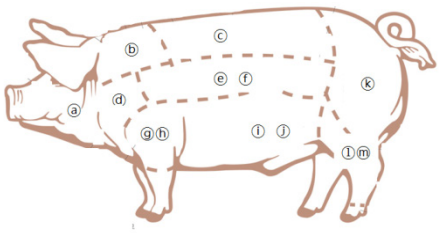
Afterward, the internal organs are washed to clean them inside and out. On Okinawa, most of the internal organs are chopped and salted and stored in a jar. The blood, liver, kidney, pancreas, and head are not preserved in salt but are consumed on the day of slaughter (Munetaka, 2005). On Jeju, the parts that are eaten raw or steamed are separated. The womb, spleen, an intestinal fat called *maerok*, and fat under the chin called *solbadi* are eaten raw. Other parts are steamed. The participants share the liver and intestines alongside alcoholic beverages (강수경, 2011).

Pig butchering differs between Okinawa and Jeju, as shown in Figure 4. These differences may reflect different ways of combining other food resources on each island and different forms of community meal (members can eat at different times of the day, for instance during a daylong party). Pork is distributed equitably among the island's community members. On Okinawa, the owner of the pig takes all the meat and stores it to continue to share it with neighbours. On Jeju, the owner takes the intestines, the head, and the bones between the head and ribs (*jeobjakppyeo*) after paying the butcher (*yongin*) for his work by offering him the anal parts, bladder, and hair. The remainder is distributed among community members in a community meal.

On Okinawa and Jeju, pork is spoken of as part of the culture of the community meal of 'making together and eating together'. The meaning of the community meal includes distributing pork to every community member. On both islands, the eating of pork at the community meal occurs at every family memorial, seasonal ceremony, and community ritual. The community meal is based on boiled pork.



Cuts of pork on Okinawa



Cuts of pork on Jeju

Cut	Okinawa	Jeju
ⓐ	Mimika (ear)	Myeori (head)
ⓑ	Chiraga (cheek)	Soldeui (bottom of head and neck)
ⓒ	Kuchama (neck)	Llrun (backbone)
ⓓ	Udeaka (neck)	Jeobjakppyeo (neck and shoulder bones)
ⓔ	Gu-ya-nuji (shoulder)	Galli (rib)
ⓕ	Bo-jisi (sirloin)	Galli (rib)
ⓖ	Uchinagani (tenderloin)	Jeongak (shoulder)
ⓗ	Haraga (belly)	Jeongak (shoulder)
ⓘ	So-ki (rib, sparerib)	Sung (belly)
ⓙ	Chibijiri (fresh meat)	Sung (belly)
ⓚ	Juju (tail)	Bipi (hip)
ⓛ	Dibichi (pig's feet or trotter)	Hugak (hind leg)
ⓜ		Hugak (hind leg)

Figure 4: Butchering a pig on Okinawa and Jeju. (© Hyekyung Hyun)

On Okinawa, pork is considered special at ceremonies. In seasonal ceremonies such as a New Year's celebration, it is important to distribute pork among community members. The New Year's pig (*syouguwachiwa*) is slaughtered and shared with relatives and neighbours. This pig has been slaughtered between November and December in the lunar year of the previous year. In a New Year's celebration on Okinawa, pork occupies an important position, whereas eating rice cakes is important on the mainland. This community meal includes praying for the safety of the family, health and prosperity for future generations, and richness of life. On New Year's Eve, *soki soba* (Okinawa soba with spare ribs, see Figure 5) is consumed, and a stew of internal organs (consisting of *kubu irichi* and intestines) is eaten on New Year's Day. *Kubu irichi*, which is a stir-fried dish made with *konbu* seaweed, means 'to be pleased'.

Figure 5: Pork-based ceremonial food on Okinawa (*Soki soba*, left, © Insil Yang) and Jeju (*Gogi-ban*, right, © Sookyung Kang).

On Jeju, someone who distributes pork at a ceremony is called a *dogam*. The *dogam* divides boiled pork into parts based on their use. The role of the *dogam* is to distribute the limited amount of boiled pork fairly to community members. The *dogam* distributes several pieces of meat, *maleun dumbi* (dried hard tofu), and *sundae* (a sausage made of blood and bean curd stuffed into pig intestine), which are collectively called *gogi-ban* (meaning 'meat tray', see Figure 5). Even the owner who provides the pig must obtain permission from the *dogam* to obtain a *gogi-ban*. The expression on Jeju meaning 'distributing *bans* (trays)' means that those meat trays are being fairly distributed. 'Eating day' refers to the day of a ceremony on which pork dishes will be expected.

The eating of pork during a community meal is an important social activity on Okinawa and Jeju. If a member fails to participate in or misses the community meal, it is treated as a very serious social issue. Distributing pork is an opportunity to provide community members with needed protein and vitamin B1, and this community meal is integral to the shared sense of community. In addition, to maintain the ecological community, labour must be shared continuously; hence, solidarity through the community meal becomes an important social activity for maintaining the community.

Food associated with pork and the formation of the food circulation system

The breeding of dung-eating pigs has played an important role in establishing the food circulation system of the islands. Pig breeding generates manure for the island's infertile volcanic soil. The acidic pork that is obtained, combined with alkaline foods such as grains and seaweeds, creates a balanced food mix. The food culture of pork combined with grains, seaweed, and vegetables can be seen specifically on the islands connected by the Kuroshio Current.

One basic common aspect of the food of Okinawa and Jeju is the use of various combinations of barley, soybeans, grains, fish, seaweed, meat, and vegetables to produce dishes. Based on the warm and humid climate of the Kuroshio Current, a food circulation system can be broadened by the supply of scarce carbohydrates and protein resources through the combination of perennial green vegetables and abundant seaweed. This diversified food circulation system has made it possible to sustain the survival and labour of community members and thus maintain their island communities. According to 오영주 (1999), the cuisines of Okinawa and Jeju consist of 150 dishes and 450 dishes respectively. These numbers of dishes exceed those in rice farming regions, including those on each island's respective mainland. The increased variety of dishes can be seen as a strategy by islanders to survive food crises. On Okinawa and Jeju, pork is involved in many recipes, utilizing every part of the pig, from head to tail, including the intestines and blood. The following are typical traditional foods that are made with pork on Okinawa and Jeju.

Pork dishes on Okinawa and Jeju are based on boiled pork. Stews and soup dishes utilize stock from the making of boiled pork. The development of stews and soups is related to the size of the community. Pork is a precious ingredient, and it is not possible to distribute sufficient amounts of pork meat to all community members. Therefore, pork is inevitably provided in the form of stews and soups to provide a sufficient amount to everyone. Stews and soup dishes are not based on one ingredient but rather on a combination of several ingredients (barley, soybeans, grains, fish, seaweed, and vegetables).

Pork is effective in increasing the total amount of food that can be distributed to community members through various combinations of ingredients. Combinations such as meat and grains, meat and seaweed, meat and vegetables, and meat and fish are the most basic forms of pork dishes. More complex combinations such as meat/grains/vegetables, meat/grains/seaweed, and meat/seaweed/vegetable might have been developed later. Therefore, these pork dishes can be understood as illustrating the development of cooking methods to feed families and village communities during the community meal.

On Okinawa, soup dishes such as *soku-jiru* (pork rib soup), *nakami-jiru* (pig intestine soup), and *tebichi-jiru* (pig's feet soup) were developed. On Jeju, pork soup with cabbage, *mom-guk* (pork soup with gulfweed and buckwheat powder), and bracken soup (pork soup with bracken) emerged. *Mom-guk* and bracken soup are typically consumed during ceremonies. All these thick pork soups are based on stock created by boiling pork bones for hours. The benefits of providing pork in the form of various soup dishes are that it (1) stabilizes the food supply, (2) promotes community nutrition, and (3) creates an ecological circulation system.

Unlike on Jeju, Okinawans have developed stewed and stir-fried dishes that tend to be attributed to the influence of Okinawa's historical exchanges with China's Fujian Province and Taiwan, which are also located along the Kuroshio Current. Okinawa was a gateway to Far East Asia, and the influence of Southeast Asia (such as the Philippines and Indonesia) via the Kuroshio Current would therefore be understandable. *Chanpuru* (an Okinawan stir-fry dish) is a good example.

In the hot and humid climates of Okinawa and Jeju, pork is marinated using salt or soy sauce for preservation purposes. On Okinawa, pork is marinated in salt for preservation for a few months and is consumed gradually at ceremonies. On Jeju, pork is kept in a pot filled with soy sauce to preserve it for relatively short periods. One characteristic of the food culture of the Kuroshio Current is the use of sauce combinations for soup with soy sauce made from soy beans and salt, with salted and fermented seafood, and with salt harvested from the beach. This practice is also present on both Okinawa and Jeju.

Community rituals and pig sacrifice

Community rituals have influenced the formation of community values and identities through disciplines (or rules) that are observed during rituals. These rituals are important for binding communities, especially on islands. Rituals exert power in the divine rather than the secular realm. Elements of rituals include sacrificial acts and procedures, taboos, and foods. The slaughtering of animals and the offering of them to a deity is generally called 'sacrifice', which appears worldwide as a ritual for connecting spiritual beings with humans (Sahito, 2008). In rice farming areas, rice offerings are common. Even when meat offerings occur, the community meal is often more important than the act of sacrifice itself. However, on islands such as Jeju and Okinawa, pig sacrifice has been widely practiced. It should be noted that pig sacrifice during rituals is widely observed on other islands along the Kuroshio Current as well.

On Okinawa and Jeju, offerings consist of pork rather than beef or chicken. Therefore, a community ceremonial feast is a recognition of the pig as a mediator between humans and nature (or a deity) and is a part of applying an ecological cultural system. On Okinawa, in festivals or ceremonies such as *Seimei Matsuri* (on the Autumnal Equinox or *Shimi* in the local language) and *Higan Matsuri* (a week around the Spring and Autumnal Equinoxes), a box containing *usannmi* (three dishes) is offered on an altar. Three animals, including a pig, are sacrificed and offered to a deity. During these rituals, Okinawans pray for health, safety, and protection from misfortune for their families.

On Okinawa, the female shaman in the local religion of Ryukyu Shinto is called an *utah*. The *utah* receives new births and serves an individual, family, or village. In this religion, people can eat only pork and chicken because they cannot eat animals that could be a god's envoy. This suggests that the beliefs of Okinawans are closely related to pig breeding. The *utah* performs a pig sacrifice on various occasions, such as annual ceremonies, funerals, construction rituals, and disaster prevention rituals (Sahito, 2008). On Okinawa, sacrifice appears in a variety of forms depending on whether it is commissioned by a village, a family, or an individual. In rural Okinawa, there is a tradition of awakening the pigs to expel evil spirits or sacrificing a pig to prevent the spread of a pandemic.

Community rituals related to pigs on Jeju consist of shamanic rituals (*dottje*) and the Confucianism festival, a village ritual. Each village on Jeju contains various shamanic shrines. Villagers believe that shamanic deities protect their lives. Therefore, if a member of a village holds a congratulatory or condolatory ceremony, he or she will go to a shrine to offer pork to a deity so that the ceremony can be performed safely. On such an occasion, a large ceremony is held to offer a whole raw pig as part of a *dottje*. Offering an entire pig to a deity has symbolic meaning.

During a *dottje*, a female shaman associated with a shrine speaks in detail to her deity about why the ceremony was commissioned and about the commissioner's process of offering pork and pig parts before praying for blessing. During this process, the pork is qualified as a sacred sacrifice to the deity, and it becomes a mediator for praying to the deity for good fortune. After the *dottje,* the pork is shared by community members. The sharing of sacrifices is regarded as a process not only for affirming the sense of solidarity in a village but also for bringing about the blessing of individuals and groups. The eating is regarded as a process in which a positive image of pigs is propagated and internalized by community members and as a process of recognizing pigs as a medium for creating human happiness. The village ritual on Jeju is practiced from the first month of the Lunar New Year until March. During a village ritual, one male pig is sacrificed. The blood and hair that are collected are offered on an altar. After the hair and intestines are removed, the raw pork is offered. Such village rituals are performed by village men in the style of Confucianism. Because men play the central role in handling pork during the ritual, this task connects the cultural value of meat with men.

At the end of the ritual, pork is distributed to everyone in the community. It is believed that the person eating this pork will experience one year without any misfortune or disease. The most important value in the lives of the islanders is the promotion of survival through the effective mobilization of labour. Eating pork improves nutrition and involves a cognitive process of recognizing the body as free of disease through protection from evil spirits.

Different forms of sacrifice are practiced on Okinawa and Jeju, but these commonly involve the following: (1) the slaughter of an animal, (2) an offering to a deity, and (3) a feast for participants. In this process, pig sacrifice is considered payment for a deity's protection. Pigs are thus a positive symbol in public ceremonies. Globally, some traditional cultures view pigs in a positive light, whereas others do not. Positive views of pigs include their being sacred sacrifices to the heavens and messengers of god. Negative images of pigs include their perception as symbols of greed, laziness, or uncleanliness (김종대, 2008). However, in community ceremonies on Okinawa and Jeju, pigs have a strongly positive image as the deity's messenger, a bringer of blessings and safety, and an amulet. This positive image has permitted the development of close human-pig interactions and made it possible to recycle pig feces as manure and to build an ecologically sustainable resource circulation system.

Conclusions

The islands of Okinawa and Jeju are well known for their pork food culture. Although the origins and development of the local pork food culture have been studied for each island, previous studies have not taken into account the regional ocean currents and maritime culture. Thus, the pork food culture on one island would have been understood only as the isolated culture of an isolated island. The Second World War and the Cold War in the 20th century as well as nationalism have impeded attempts to understand the island cultures of the Kuroshio Current. As noted earlier, however, island spaces are inter-related (Stratford et al., 2011), and it is humans who construct understandings of inter-island relationships (Lee et al., 2017). The pork food culture discussed in the present study can be understood as a product of a cultural network along the Kuroshio Current.

The existence of a shared maritime culture along the Kuroshio Current is beginning to be recognized. Without this recognition, the pork food culture would still be understood as the unique food culture of each island. Fortunately, research on the origins and development of the pork food culture on Okinawa and Jeju has begun. This research demonstrates (1) that the pork food culture on Okinawa and Jeju is exogenous rather than endogenous, (2) that the pork food culture was spread via the Kuroshio Current, (3) that the pork food culture was conditioned by the local ecology, and (4) that the island communities accepted the pig culture based on an ecological rationale.

The communities of Okinawa and Jeju made pigs part of their islands' broader resource circulation system. This process involved pig breeding and pork distribution, the division of labour, and the expansion of the food circulation system through the combination of food ingredients. Community belief and rule systems were also formed through the sacrifice of pigs to the deities. This study has focused on human attitudes toward creating the ecological system of the island community through the pork food culture of Okinawa and Jeju, which is characteristic of the pork food culture found along the Kuroshio Current.

References

References in English

Austin. M.H. (1903). *The land of little rain*. Boston & New York: Houghton Mifflin.

Baldacchino, G. (2018). Seizing history: development and non-climate change in Small Island Developing States. *International Journal of Climate Change Strategies and Management*, 10(2). https://doi.org/10.1108/IJCCSM-02-2017-0037

Baldacchino, G., & Kelman, I. (2014). Critiquing the pursuit of island sustainability: blue and green, with hardly a colour in between. *Shima*, 8(2), 1-21.

Callicott, J. B. (1989). *In defence of the land ethic: Essays in environmental philosophy*. Albany, NY: SUNY press

Christen, M., & Schmidt, S. (2012). A formal framework for conceptions of sustainability: a theoretical contribution to the discourse in sustainable development. *Sustainable Development*, 20, 400-410. https://doi.org/10.1002/sd.518

Clark, E., & Tsai, H. M. (2009). Ecologically unequal exchange and landesque capital on Kinmen island. *Asia-Pacific Forum*, 44(2), 148-167.

Grydehøj, A., & Kelman, I. (2017). The eco-island trap: climate change mitigation and conspicuous sustainability. *Area*, 49, 106-113. https://doi.org/10.1111/area.12300

Hong. S.K. (2013). Island bio-cultural diversity and traditional ecological knowledge. *Journal of Marine and Island Cultures*, 2(2), 57-58. https://doi.org/10.1016/j.imic.2013.11.005

Imran, S., Alam, K., & Beaumont, N. (2014). Reinterpreting the definition of sustainable development for a more ecocentric reorientation. *Sustainable Development*, 22, 134-144. https://doi.org/10.1002/sd.537

Jackson, S., & Palmer, L.R. (2015). Reconceptualizing ecosystem services: possibilities for cultivating and valuing the ethics and practices of care. *Progress in Human Geography*, 39, 122-145. https://doi.org/10.1177/0309132514540016

Lee, S. H., Huang, W. H., & Grydehøj, A. (2017). Relational geography of a border island: local development and compensatory destruction on Lieyu, Taiwan. *Island Studies Journal*, 12(2), 97-112. https://doi.org/10.24043/isj.33

Marsh, G. (1864). *Man and nature; or, physical geography as modified by human action*. New York: Charles Scribner.

Mercer, J., Kelman, I., Alfthan, B., & Kurvits, T. (2012). Ecosystem-based adaptation to climate change in Caribbean small island developing states: integrating local and external knowledge. *Sustainability*, 4(8), 1908-1932. https://doi.org/10.3390/su4081908

Miller G.T. Jr., & Spoolman, S.E. (2009). *Living in the environment: principles, connections, and solutions*. Belmont: Brooks/Cole.
Munetaka, H. (2005). *Pork country: Okinawa*. Japan: Seiindo.
Næss, A. (2008). *Ecology of wisdom: writings by Arne Næss*. A.R. Drengson & B. Devall (Eds.). Berkeley: Counterpoint.
Nemeth, D.J. (1987). *Architecture of ideology: Neo-Confucian imprinting on Cheju island, Korea*. Berkeley: University of California Press.
Polman, N., Reinhard, S., van Bets, L. K., & Kuhlman, T. (2016). Governance of ecosystem services on small islands: three contrasting cases for St. Eustatius in the Dutch Caribbean. *Island Studies Journal*, 11(1), 245-264.
Pugh, J. (2018). Relationality and island studies in the Anthropocene. *Island Studies Journal*, forthcoming. https://doi.org/10.24043/isj.48
Qiu, S., Yue, W., Zhang, H., & Qi, J. (2017). Island ecosystem services value, land-use change, and the National New Area Policy in Zhoushan Archipelago, China. *Island Studies Journal*, 12(2), 177-198. https://doi.org/10.24043/isj.20
Sahito, H. (2008). Diversity of Japanese Okinawa sacrifice. *Journal of Chung-Ang Folkloristics*, 13, 41-61.
Sigeji. M., & Nam. E. W. (1995). *The secret of Japanese longevity: Okinawa longevity village*. Seoul: I-GU Publishing.
Stratford, E., Baldacchino, G., McMahon, E., Farbotko, C., & Harwood, A. (2011). Envisioning the archipelago. *Island Studies Journal*, 6(2), 113-130.
Stauffer, R.C. (1957). Haeckel, Darwin, and ecology. *Quarterly Review of Biology*, 32, 138-144. https://doi.org/10.1086/401754
Youn L.L. (2017). *Private houses in the east china sea culture: understanding the traditional architecture of Jeju, Kyushu, Ryukyu and Taiwan*. Seoul: Sanjini.
United Nations (1987) *Our common future: Brundtland Report*. Oxford: Oxford University Press.
Vitousek, P.M. (2002). Oceanic islands as model systems for ecological studies. *Journal of Biogeography*, 29(5-6), 573-582. https://doi.org/10.1046/j.1365-2699.2002.00707.x

References in Korean

강동식. et al. (2009). 『일제 강점기 제주지방행정사』. 서울: 가이드.
강수경. (2011). 『제주지역 돼지고기 음식문화의 전통과 변화: 의례 음식에서 일상음식, 향토음식으로』. 제주: 제주대학교.
공명수. (2008). 「생태도시의 조건」. 『포천신문』 (http://www.ipcs21.com).
공명수. (2010). 『생태학적 상상력과 사회적 선택』. 서울: 동인.
김광억. (1988). 「성인식: 의례적 구조와 문화적 의례」. 『정신건강연구』, 7, 19-42.
김종대. (2008). 「돼지를 둘러싼 민속상징, 긍정과 부정의 모습」. 『중앙민속학』, 13, 63-74.
김찬흡. (2002). 『역주 탐라지』. 서울: 푸른 역사.
박길용. (2009). 『현대환경학』 대영출판사.
『조선왕조실록』 세조 8년 기사
석주명. (1968). 『제주도수필집』. 서울: 보진재.
오영주. (1999). 『제주향토음식문화와 투어리즘』. 제주: 제주학회.
윤일이, 尾道建二 (2010). 동중국해권 민가의 聖域에 관한 연구. 문화재, 43, 60-81.
장보웅. (1981). 『한국의 민가 연구』. 서울: 보진재.
장보웅. (1974). 「제주도 민가연구」. 『대한지리학회지』, 9, 13-31.
정연학. (2008). 「중국의 돼지문화」. 『중앙민속학』, 13, 7-39.
진영일. (2008). 『고대 중세 제주역사 탐색』. 제주: 제주대학교 탐라문화연구원.

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Islands of islands: responses to the centre-periphery fractal model in East Futuna (Wallis and Futuna) and the Belep Islands (New Caledonia)

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ABSTRACT: Starting from two case studies, the Belep Islands (New Caledonia) and Futuna (Wallis and Futuna), this essay presents the hypothesis that colonial and post-colonial dynamics tend to reproduce, as in fractals, the centre-periphery model. In the 'Francophone Pacific' inter-island relationships have historically been created in which the peripheral islands of islands claim their autonomy and, at times, their total independence from the central island. This is the case for Futuna, a peripheral Polynesian island that claims autonomy from Wallis. It is also the case for Belep, in the extreme north of New Caledonia, which suffers from persistent marginality with regard to the *Grande Terre*. Decolonisation of Futuna and Belep seems possible at the cost of dismantling the centre-periphery fractal model. These islands of islands show us how the reticular model, the enhancement of relationships and reciprocity, and the recovery of their complexity are a possible way out of colonialism.

Keywords: archipelagos, centre-periphery, East Futuna, New Caledonia, non-self-governing islands, Oceania

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An anthropology of European overseas islands and territories?

Drawing upon the 'island sovereignty' approach recently proposed by Gerard Prinsen and Séverine Blaise (2017), the present article develops a critique of the centre-periphery fractal model for non-self-governing islands. We understand non-self-governing islands as island and archipelagic territories that are geographically and culturally distant from their metropoles and connected to them by persistent relations imposed on them during imperial colonial times. Our approach echoes Prinsen and Blaise (2017, p. 57) in showing that the "islands are not rejecting change: they are rather active in changing that relationship [with the colonial metropole] and they are quite successful in doing so on their own terms." The processes leading to autonomy that we will here discuss are of an active, creative character and model new political and social forms (Favole, 2010).

Our article seeks specifically to underline that even *within* certain non-self-governing islands and archipelagos, there are islands, such as Futuna and Belep, that are actively negotiating relations with their central island (Wallis and *Grande Terre* respectively), seen locally as a centre from which to take distance. These are thus islands of islands, aspiring to

shed the condition of being a hyper-periphery, being able to choose their own relations in autonomy, be it with other islands, other territories, or mainlands. The result, as in the case of Futuna, is a revindication of the peripheral island's autonomy from the central island and the maintenance, creation, or strengthening of a strong connection to the (distant) metropole.

Prinsen and Blaise (2017) set forth five mechanisms as typical characteristics of 'islandian sovereignty': (1) islands vote 'no' in independence referendums; (2) islands continuously negotiate constitutional exceptions; (3) islands get away with bending their metropoles' law or regulations; (4) islands manage public budgets whose shortfall in domestic revenues are complemented by significant financial transfers from the metropole; (5) islands can sign international treaties or agreements beneficial to them but uncomfortable for their metropole and/contrary to its interests. To these, we wish to add a sixth, the coherence of which must be verified through further comparative surveys. What we suggest is (6) the existence or aspiration to create reticular or archipelagic systems through the creation of migrant communities and through the activation of exchange networks that include other islands or areas, which can be near or not so near.

Our approach underlines the importance of local forms of leadership and socio-political organisation. As cultural anthropologists, we agree with Zachary Androus and Neyooxet Greymorning's (2016, p. 447) critique of sub-national island jurisdiction (SNIJ) literature that focuses "on economic factors to the exclusion of social, cultural and political aspects." In the Belep Islands, for example, we are dealing with a *chefferie* (chiefdom) founded in the middle of the 16th century. During the 19th century, this was transformed in accordance with the will of one of its *teamaa* (chief), with the influence of Catholic missionaries and under colonial administration. Restructured again in 2005, when the 21st *teamaa* was installed, it mirrors the present-day needs of Belema society, reintroducing complex ritual and political connections within and without the Belep Islands. The creativity that can be seen in the polyarchy of Futuna results from the island's position between two ancient Polynesian chiefdoms (still vibrant today), a Catholic mission, and recent French institutions. At the same time, the 'gift' and 'redistribution' economy has given these islands a creative form of local welfare state (Favole, 2008) in which the persistent subsistence economy based on horticulture coexists with the transfer of conspicuous funds from the metropole, initiating new 'articulations' (Clifford, 2001). We believe that the way in which local socio-political dynamics shape global and international currents that pass through these islands is of utmost importance. Our experience with participant observation and long-term and repeated fieldwork has led to us acknowledging the complexity of each individual case, which highlights the risk of using 'universal' economic and political indicators without a continuous and attentive consideration of local contexts. 'Deep knowledge' and 'thick description' of local cultures (Geertz, 1973) are necessary to "create the conditions for a symmetrical anthropology and to make possible the idea of knowledge that is both *situated* and *shared*" (Saillant et al., 2001, p. 27).

Within this theoretical and ethnographical framework, we find it particularly interesting that Futuna, Belep, and other non-self-governing islands are part of the so-called 'Overseas Europe', namely those islands and territories linked to individual continental European states, which are now (in EU bureaucratic lexicon) known as Overseas Countries and Territories (OCTs) and Outermost Regions (ORs). Over the past decades, these islands and territories have experienced influences not only from their respective metropoles but also from processes of European integration and dis-integration. The present paper in fact belongs to a wider research project concerning intercultural coexistence and statutory changes in European overseas territories, funded by the Department of Culture, Politics and Society at the University of Turin.

Starting from our lengthy field research on 'Francophone Oceania' (Futuna and New Caledonia) and more recent research carried out by Adriano Favole on Réunion Island, our theoretical and ethnographic perspectives now tend towards the development of a

comparative anthropological approach to the European 'overseas countries'. The notion of 'overseas' is obviously quite problematic and loaded with a colonial burden: apart from its institutional meaning in the ambit of the individual national sovereignties and the EU, it includes a number of islands and territories that are of heterogeneous ethno-cultural composition, are located in diverse regions, and have had divergent colonial and postcolonial experiences. Nonetheless, we feel that it is precisely the variety of the experiences of interethnic conflict and coexistence that make overseas territories an important area of study, offering a set of ethnographic examples useful for developing a discourse on the pluralism of European citizenship.

To simplify, we could say that, viewed from these peripheral islands of Europe, the notion of 'overseas' appears highly ambivalent, ethnocentric, ambiguous, and colonial. The prefix 'over-' in itself sounds 'remote', 'peripheral', if not 'exotic'. Yet it is true that during some historical periods there was a certain convergence between these heterogeneous areas. We refer, for example, to the considerable resonance of the nationalist uprisings of New Caledonia during the 1980s (Ghisoni et al., 1988), to the influence of the *créolité* ideology in the Caribbean and the Indian Ocean in the 1970s (Bernabé et al., 1989), and to the movements that have characterised the history of many islands, such as the strong presence of the community of Wallis and Futuna in New Caledonia and the tense relationship with local Kanak communities. The current exposure of OCTs and ORs to European integration policies is a further and unprecedented *trait-d'union* between the overseas territories, the effects of which have thus far been understudied (Adler-Nissen & Gad, 2013). Based on the model Wouter Veenendaal (2015) proposes for the Caribbean region, we feel it important to develop a comparative analysis of overseas Europe, relative not only to the political dynamics of European nations such as the United Kingdom, France, the Netherlands, Spain, and Portugal but also to the unprecedented relationship with Brussels and EU institutions.

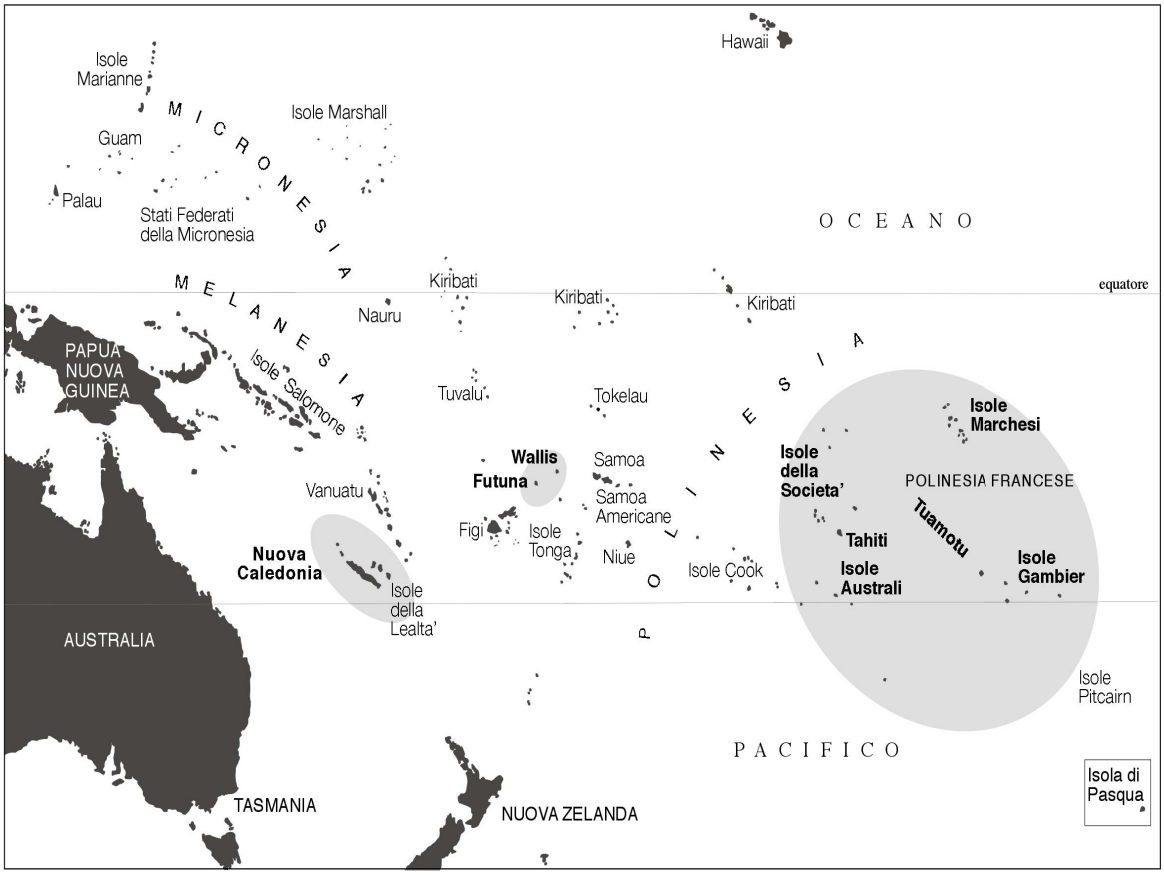

Figure 1: Map of French-speaking Oceania. (© Adriano Favole, 2010)

Futuna: a hyper-periphery of Wallis

Colonial and, more recently, post-colonial politics imposed a 'fractal model' upon islands' political and social organisation, one based on a centre-periphery axis. By 'fractal model', we refer to the replication, at different scales, of the same centre-periphery model of dependence that created actual islands-of-islands in many overseas territories. Today, some of these islands-of-islands are seeking to interrupt these dynamics, claiming autonomy from their central islands. Although we focus on the cases of Futuna and Belep, similar circumstances apply or have applied in recent history to many non-self-governing islands and small island states (e.g. Mayotte and Réunion, Mauritius and Rodriguez, St. Marteen and Curaçao). We take our point of departure from an event that Adriano Favole had the opportunity to investigate in 2006, when the two chiefdoms on the island of Futuna officially asked the French authorities for the constitution of a sub-prefecture.

Futuna is an island in Western Polynesia which, together with Wallis ('Uvea), form the *Collectivité d'outre-mer* (COM) of Wallis and Futuna (an OCT in EU terminology). Futuna currently has a population of approximately 3600 (INSEE, 2013): in the last ten years, there has been a considerable drop (18%) in the island's population due to a low birth rate and an intense migratory movement above all towards the Melanesian archipelago of New Caledonia. In 2009, over 20,000 natives of Wallis and Futuna were estimated to be living in New Caledonia, amounting to 8% of New Caledonia's population. Inhabited around 2700 years ago by an Austronesian-speaking people who made Lapita pottery, Futuna was 'discovered' by Dutch explorers in 1616. A stable European presence was only established in 1837, when Catholic missionaries from the Society of Mary (the Marist Brothers) arrived on the island: this event created the link between Wallis and Futuna (Angleviel, 1994). Quite by chance, the French missionaries settled on both islands, which soon became a French and Catholic enclave in a predominantly Anglophone and Protestant region (Tonga, Samoa, Fiji). A French protectorate from 1887 onwards, Futuna became part of the French overseas territories in 1961, following a referendum in which the local population voted by a large majority (more than 99%) for annexation by France (Roux, 1995). The Wallis and Futuna's political status has undergone no major changes since, unlike two other OCTs in the Pacific, New Caledonia and French Polynesia, which have acquired progressively more significant forms of autonomy (Lotti, 2010).

From a political standpoint, Futuna is an island in which traditional institutions (two *chefferies à titre*, the chiefdoms of Sigave and Alo) coexist alongside French-style political institutions, resulting in a polyarchy characterised by a plurality of leaders and power centres (Favole, 2007). The two local chiefdoms (*pule'aga sau* in Futunan) are confederations of chiefs (*aliki*), divided into village chiefs (*aliki pule kolo)* and district chiefs (*aliki lasi*): the king (*Sau*) is the supreme authority, not in the sense of holding oligarchic and pyramidal power but as the 'symbol' of the chiefdom and the *trait-d'union* between the various leaders (Favole, 2000). The spatial extension of Futuna's two chiefdoms, each with their own *Sau*, coincide with the administrative districts created by the French and with the two Parishes set up by the Church. The two *Sau* are members of the Territorial Council. The supreme administrative authority of the territory is the Prefect (Futuna is the only OCT to have maintained this colonial-era post), who nominates his Delegate to Futuna. The Territorial Council is comprised of the Prefect, the Prefect's Delegate, the three *Sau* (the two kings of Futuna and the *Lavelua* of Wallis), and three members nominated by the Prefect. The Territory also has an Assembly consisting of 20 elected councillors (known as *les élus*), of whom thirteen are from Wallis and seven from Futuna (four from Alo and three from Sigave). Futuna is among the Polynesian islands to have maintained a traditional system of land management (Favole, 2014; Panoff, 1970): there is still no land register resembling that in Western countries.

Before the arrival of missionaries and before falling under French influence, Futuna maintained relations with Samoa, which is traditionally regarded as the place of origin of Futuna's first *Sau*, who introduced the concept of 'royalty' to the island (Burrows, 1936). Some families of chiefs say they come from Tuvalu, others from Tokelau, and yet others from Wallis. According to some elders who Adriano Favole was able to interview in the mid-1990s, in ancient times the people of Futuna often went to fish at Cikobia, an island in Fiji. It is said that a migratory wave from Cikobia led to the inhabitation of Tikopia, a Polynesian enclave in the Solomon Islands studied by the famous ethnologist Sir Raymond Firth. The peoples of Futuna and Tikopia speak two very similar Polynesian dialects, and reconstructions of Patrick Kirch (1994) suggest that they at one time shared an analogous ritual agricultural calendar.

Although it is now difficult to estimate the frequency of the journeys back and forth and the intercultural contacts, we can be certain that Futuna was by no means isolated in the past. In 1996, when Adriano Favole undertook his first fieldwork on the island, the Futunans who had just returned from their first participation at the Festival of Pacific Arts (Apia, Samoa) said they were astonished to have 'discovered' an island on which a completely comprehensible language was spoken. As the French presence increased, however, Futuna progressively became peripheral to a new centre, Wallis/'Uvea. The missionaries set up the headquarters of the Diocese and the Bishop's Palace on Wallis. When the Protectorate was founded at the end of the 19th century, Wallis had the right to host a French secular Commissioner, while the delegation to represent the French institutions (custody of the flag, postal service, poll tax collection) was entrusted to the head of the Catholic mission until 1956. With the creation of the Territory of Wallis and Futuna, the centre-periphery model was further strengthened. The Prefect took up residence on Wallis, and all heads of the various services (public works, culture, agriculture) lived on Wallis. Futuna was only home to their 'delegates'. Holding the majority in the Assembly, the island of Wallis claimed most of the funds destined for the territory. The only port capable of receiving large cargo ships is on Wallis, while the small port of Leava on Futuna is closed in rough seas. The international airport at which large planes can land, the bank, the shopping centres, and the car dealers are all based on Wallis. Once linked to Samoa and outside the orbit of the ancient Tongan empire (which conquered Wallis, imposing a member of the Tongan royal family as supreme head), Futuna is now dependent on the 'Tonganised' island of Wallis. Every year, Wallis is the destination for hundreds of Futunan children who, when they have completed their middle school studies, go to the senior high school and sixth form college on the 'rival island' (there are no secondary schools on Futuna).

When returning to Futuna for fieldwork in 2006, Adriano Favole came across a lively political discussion that pervaded many discourses of the traditional chiefs and of the *élus* (Favole, 2007). During a recent journey to France in which they had met President Jacques Chirac, a delegation of Futunan chiefs had officially asked for the creation of a sub-prefecture on the island, receiving the general approval of the President. It was, according to Favole's interlocutors, a first step towards the creation of the *Collectivité d'outre-mer* of Futuna. The sub-prefect, unlike the Delegate of the Prefect, would be nominated directly by Paris, without passing through the rival 'centre' of Wallis. The difference may appear subtle, but it would open up a new scenario, in which supreme administrative authority would be disentangled from the rival island. Although this measure, repeatedly announced by the French authorities, would never be put into practice, it is a symbol of the widespread intolerance that the Futunans show towards the people of Wallis. Generally speaking, Futunans desire the sub-prefecture in order to claim a direct—rather than mediated—bond with France.

In common with many other non-self-governing islands (Princen & Blaise, 2017), Futuna held a referendum (1959) in which the island (like Wallis) voted by a large majority for full annexation by France and access to French citizenship, thus leaving behind the Protectorship period. Futuna, referring to the second identification criteria by Prinsen and

Blaise as an 'islandian sovereignty' trait, also negotiated constitutional exceptions when a constitutional change became necessary in order to recognise the status archipelago's three *Sau* (kings) within the *République*. Wallis and Futuna also benefit from remarkable exceptions to metropolitan laws, such as the public financing of Catholic schools (to which the state has granted a monopoly for primary education) and denial of genuine religious plurality. In the early 1990s, the two *chefferies* on Futuna declared the Evangelical religion, introduced to the island by a few Futunans returning from university studies in Lyon, as inadmissible. The traditional chieftains went so far as to dismiss some nurses from the hospital in Kaleveleve who had converted to Evangelicalism. In retaliation, for a number of years, the Evangelicals did not participate in the redistributive ceremonies of the *katoaga* or drink the traditional Polynesian beverage (*kava*), which to this day represent important social activities, with the act of sharing being considered a demonstration of loyalty to the traditional leaders.

On Futuna, as in the 'paradigm' explained by Prinsen and Blaise (2017), local authorities are constantly negotiating with the metropole, whose financial transfers constitute the entire budget of an island that produces no goods for export. It must, however, be noted that Futuna's economy is far from passive and entirely dependent. Horticulture (taro, yam, manioc), pig breeding, fishing, the building of traditional homes (*fale*) with local materials, and other economic activities are flourishing and help guarantee life on the island as well as grant those who return after time away the possibility of satisfying their basic needs. Futuna can in a sense be regarded as following the MIRAB model (Bertram & Watters, 1985), with overseas 'remittances' possessing a special status in this case due to the importance of relationships of exchange and gift giving between those who live on the island and those who do not. Gifts of money that migrant communities send to inhabitants of Futuna during redistributive ceremonies (*kataoga*) enter the ample circuits of reciprocity through which the people who live on Futuna guarantee maintenance of the land of extended families (*kutuga*), to which migrants can later (often at retirement) return.

The traditional authorities and the *élus* on Futuna have encouraged commercial agreements with the Fiji and New Zealand on a number of occasions: in 2006, for example some Futunans bought cars from New Zealand, refusing to pay the tax that is levied on the introduction of non-French goods. The Delegate of the time contested the purchase on the basis of safety rules that would stop people driving a right wheel drive car on the island. To Prinsen and Blaise's five criteria we would add, in Futuna's case, the contestation of the centre-periphery dynamic that links the island to its 'rival' Wallis. The negotiation of autonomy based on a direct link with Paris is reinforced by the conviction that the large migrant community living in New Caledonia and the growing community of Futunans living in France (above all in Paris and the Côte d'Azur) today form a Futunan 'archipelago' that can offer assistance in the event of natural calamities (earthquakes and cyclones) and help the community that lives permanently on the island. This is in addition to the support Futuna receives from the metropole and the conspicuous funding coming from the EU. The 1959 vote by Futunans to join France was without a doubt prompted in part by the possibility of receiving assistance in post-cyclone periods.

The case of Futuna is symbolic because the fractal centre-periphery model can easily be applied on the micro-level as well. The relationship between the island's two chiefdoms (Sigave and Alo) in fact also reproduces the centre-periphery model. As we will see for Belep, the missionary presence had a strong influence on Futuna's dwelling pattern: the nearby island Alofi lost its population quickly and is today used exclusively for horticulture. The northern coast of Tu'a lost part of its population, too. The population concentrated on the southern coast where the mission's churches and schools were built. The presence of the missionaries led to a stabilisation of the borders between the two parts of the island and the 'doubling' of the royalty (which consisted of the right to nominate a *Sau* or paramount chief). In fact, ever since the missionaries arrived, Alo and Sigave have been two rival halves, battling furiously

for the right to nominate the *Fakavelikele*, the 'title' that designates the supreme position on the island (Favole, 2000). While the first missionary, Pierre Chanel, initially went to live in Alo, it was Sigave that benefitted most from the increasing western presence. The first harbour installation was constructed in Leava, and it was in this village of Sigave that the French delegation established its headquarters when the Territory was constituted. Nowadays, Leava is home to the only hotel on the island, a couple of restaurants, a travel agency, and the port. Some islanders describe Sigave using hegemonic concepts such as the 'modern' and 'developed', as in which, for example, young people can spend the evening at a discotheque. Alo is the 'traditional' and somewhat 'backward' kingdom, where the chiefs forbid restaurants, discotheques, and consumption of alcohol on the weekend. Mass is held at 05:30 at Alo's cathedral but has been moved to more 'modern' hours in Sigave. Overall, Alo is the hyper-periphery of Sigave, of Wallis, of New Caledonia, and of the distant metropole—a sort of island of marginality to the n^{th} power!

Belep: a story of isolation

The Belep Islands are an archipelago of small islands situated in the northwest of New Caledonia. Belep consists of Art Island (*Aar*), Pott Island (*Phwoc*), and smaller islets. The Belep Islands represent the extreme northern extension of the *Grande Terre* (as the central island of this Melanesian archipelago is known) and are the most distant destination from the capital Nouméa, which is about 500 km away.

There is only one permanently inhabited site in the Belep Islands, where all services are concentrated and where the entire population lives. This is Waala, the village situated in the bay of the same name, on the western coast of Art Island. The village is traversed by a tarmacked road and has a water supply, electricity, and telephone lines. There is the mayor's office, a post office, a doctor's surgery, infant and elementary schools, a football pitch, a volleyball court, two or three shops, a petrol station, the office of the *chefferie* (chiefdom), and a church. There is a jetty where the catamaran and small merchant ships that link the archipelago with the *Grande Terre* can moor, and a few kilometres away, there is a small airfield.

The Belep Islands' soil is ferralitic and thus unsuitable for cultivation. The coasts of Art and Pott, the two major islands, are scattered with bays and inlets, called *nana pwang* in the local language (*pulu Belep*). In the *nana pwang,* alluvial deposits enrich the reddish soil, making possible the horticulture that is so important for oceanic peoples (Barrau, 1956; Gourou, 1948; Haudricourt, 1962). In the bays stand the mounds in which the yams (*Dioscorea sp.*) are grown. The Kanak societies of New Caledonia are described by André Georges Haudricourt as the "civilisations of the yam" (Haudricourt, 1964), which is considered a sacred plant.

The yam drives Belep's agricultural calendar, marking the rhythm of work in the fields, and consequently determining the presence of the Belema people (the inhabitants of the Belep Islands) in the bays. In fact, alongside the fields stand the houses seasonally occupied by families in accordance with the production cycle of the crops. In particular, the bays are inhabited continuously during the holidays after the school year, while for the rest of the year the population remains in Waala village, which in turn empties out during the holidays.

The village was founded more than 150 years ago as a result of the combination of two projects: the political project of Wahoulo Chahup II, an enterprising local chief, and the religious project of three French missionaries from the Society of Mary. In 1855, Wahoulo Chahup II spent a few months at La Conception, a Catholic mission created that same year near Port-de-France, now Nouméa. It was a compulsory staging post for all Marists who arrived from France and for over 20 years La Conception was a 'hatchery' for missionaries and catechists sent to open the majority of the missions in New Caledonia and other French colonies in the Pacific (Brou, 1982). Wahoulo insisted with great determination that a group

of missionaries accompany him to Aar when he returned at the start of 1856 to become the new *teâmaa* (Dubois, 1985; Lambert, 1855-1875).

Composed of the word *teâ* ('the first-born, the chief') and the suffix maa, which indicates 'the group', the term *teâmaa* is translated into French by the expression of colonial origin *grand chef* ('big chief'). The chain of command implied by the term *grand chef* only occasionally characterises the figure of the *teâmaa*, yet the strengthening of the *teâmaa*'s political authority was partly the work of the colonial system and partly due to the enterprise of a number of chiefs from the north of New Caledonia, including Wahoulo Chahup II himself (Douglas, 1972).

The chief ordered the Belema to convert to Christianity as proof of acceptance of his authority, which he also extended through violence to the island of Phwoc (previously a separate political unit from Aar). The plan for political dominance enacted by Wahoulo and the Marist missionaries required unification of the population within a single central settlement. In fact, at the time, the Belema lived in small communities scattered along the coasts—the same sites where seasonal cultivation is located today.

The bay of Waala, the most sheltered on Aar, was chosen as the site for the mission, and the *teâmaa* transferred the chiefdom's headquarters (*kavebu*) there. The *teâmaa*'s political ambitions matched those of the missionaries, who sought to implement a 'reduction' on Aar (Dubois, 1985), in accordance with the population concentration model of the *reducciones* instituted by the Jesuits centuries earlier in South America, then still considered an exemplar of 'evangelical efficacy' (Laux, 2000). Bringing the Belema together around the mission buildings seemed to be the only way of ensuring that children went to school and that everyone took part in catechism and the liturgy.

The processes of production and distribution of symbolic and material resources were likewise centralised, and the *teâmaa*'s social role and political power were redefined to the detriment of complementary figures, such as those of the *kawu pwemwa* ('masters of the land'). Wahoulo Chahup II, who took the name of Amabili Wahoulo when baptised, did not hesitate to destroy objects, buildings, cultivations, and entire settlements to overcome resistance to the central settlement. Within a couple of years, all the inhabitants of Aar had abandoned the scattered settlements and moved to Waala.

A few years later, the *teâmaa* and the missionaries replicated this same population, power, and resource concentration scheme on Phwoc, the northernmost island (Gilibert, 2007). Nevertheless, in 1874, the Poyama were forced to abandon the 'reduction' of Phwoc, and after having suffered from periodic epidemics, the island's inhabitants moved to Waala. A French settler took up residence on Phwoc shortly thereafter, and the Belema lost all rights to the island a few years later. It was only in 2010 that some clans were able to reclaim their lands.

Over the past 150 years, the history of the Belep Islands has been characterised by a dual process: while the creation of the central settlement facilitated internal centralisation, it also produced the progressive marginalisation of the small archipelago relative to the rest of New Caledonia. In effect, all the projects for economic development—those attempted by the missionaries and those of the colonial administration—depended on the disruption of local and regional relationships. The Marist Brothers soon founded a sort of theocracy (Devambez, 1989), which translated into the strict control exercised by the missionaries over interactions with the outside world. They presented themselves as the sole interlocutors of the colonial administration and managed relations with the colonists and with the European merchants and sailors, who were mainly interested in copra and fishing for sea cucumbers. Moreover, the new religious groups redirected the traditional relationships between the Kanak communities of northern New Caledonia (Dubois, 1985), leading to the suspension of political relations, marriages, and rituals with groups that had converted to Protestantism.

The reduction in relationships with the outside world led to an increase in Belep's isolation. On other islands, such as the Polynesian islands—including Wallis and Futuna—

studied by Claire Laux (2000), insularity initially hindered Catholic missionaries' efforts, but as time passed, the situation was reversed in favour of the creation of 'genuine Catholic theocracies', as some observers designated them, ignoring indigenous agency. In contrast, the opposite occurred in Belep, and the characteristics that had initially contributed to the mission's success ultimately became unfavourable. The low population level, which had halved since the arrival of the missionaries, together with the distance from the *Grande Terre* and logistic difficulties, forced the Marists to abandon Waala in 1876. Nonetheless, Belep's isolation—precisely what drove the missionaries away—attracted the interest of the colonial administration: like the Isle of Pines at the southern tip of New Caledonia, Belep was so great a distance from the *Grande Terre* as to be ideal as a prison colony for 'undesirables'.

An initial project to create a prison camp for France's *communards* (supporters of the Paris Commune) failed swiftly, but the opportunity presented itself once again when the Kanak revolted on the *Grande Terre* in 1878. Over 300 men, women, and children, especially from the region of Bourail, were deported to Aar and, in part, to Phwoc. Their arrival forced the missionaries to return, not only in an attempt to protect the Belema, now converted to Catholicism, from the dangerous influence of the 'pagan' rebels, but also in the hope of converting the new arrivals by integrating them with the archipelago's existing inhabitants. To this end, the Belema, who had returned to their lands during the missionaries' absence, were once again concentrated in Waala. In 1881, the population, which had suddenly increased, seemed condemned to famine due to the lack of land suitable for cultivation. Two years later, as soon as they were offered the opportunity to leave Belep, the majority of the exiles departed, but those who remained were integrated in the Belema society through adoption and marriage.

In 1892, the island of Aar was requisitioned as the site of a leper colony, destined to house the sick from all over New Caledonia (Devambez, 1989). The Belema strongly opposed the island's evacuation, but their efforts were in vain. The leper colony was established, and the original population was transferred to Balade, where they lived in poverty for seven years (Dubois, 1985). Once again, the distance from the *Grande Terre* made supplying the island too onerous, and in May 1898, the leper colony was closed. Leprosy spread amongst the Belema, who immediately returned to the island after the hospital's closure.

To return to the fractal model, it may be useful to recall that, at the dawn of its colonial history, New Caledonia itself was a penal colony. When not filled with 'social refuse' rejected by the centre, the colonial administration regarded Belep simply as a collection of islands that should be cleared of its population. The colonial government, like the missionaries on many occasions, repeatedly sought to remove the Belema from the archipelago: it would be more useful and convenient to evacuate these islands than to maintain them since they did not offer sufficient resources for independent development along colonially imagined lines (Devambez, 1989).

This situation was associated with a paradoxical demographic situation. The periods of high mortality, caused by epidemics, were followed by phases of overpopulation, linked to sudden increases in the number of inhabitants. The already scarce agricultural areas were further reduced by the presence of French settlers, making it difficult to feed the population, which although limited, was disproportionate to the yield of an increasingly restricted territory. In fact, it was only in the early 1940s that the Belema began to overcome the cycle of illness and population decline. It was even necessary to repair the schools, to house the increasing number of children, and extend the church, which was finally crowded with worshippers (Dubois, 1985).

The history of reception and exile, complementary dynamics that contributed equally to the evolution of the Kanak societies (Naepels, 2013), continued until recent times. In the 1970s, for example, increasingly bitter conflicts over land rights broke into riots that devastated Waala. About 100 young people left Belep to settle on the *Grande Terre*,

particularly in Nouméa. Later, in the 1980s, there was a second wave of violence and another considerable departure, with an even greater number of Belema moving to the suburbs of Nouméa. The exodus from Belep to New Caledonia's main city has increased since 1996. Today, an allotment on the edge of Nouméa is called Les Jardins de Belep (Belep's gardens) and maintains close social, economic, and political relations with the village of Waala. At a ritual level, the centre-periphery logic is reversed, since Waala represents the ritual centre, and Nouméa is the periphery. This becomes evident every time a funeral or wedding is celebrated in Waala: a delegation sets out from Les Jardins de Belep to reach the village and participate through gifts and money gathered by the small community of emigrants.

Belep continues to be considered by its inhabitants, and described from outside, as peripheral, marginalised, and even isolated and backward, above all due to transportation difficulties. Once again, however, this is not for geographical reasons alone but is also a result of relatively recent historical factors.

Many Belema men have worked for long periods on merchant ships and big fishing boats because even today the Belema are considered good navigators and sailors. Previously, first with dugout canoes and later with cutters, propelled by oar and sail, the Belema sailed against the currents to Nouméa or to the atolls of Entrecasteaux, over 100 km northwest of Phwoc. The men went there, above all in December, to catch sea turtles for ceremonial meals, risking a dangerous journey that was never undertaken by just one boat. These activities involved crossing the Grand Passage and then navigation in the open ocean, without the protection of the coral reef. To return, it was necessary to wait for a favourable wind and hope that there was a sufficient supply of drinking water. The final such expedition to the island of Surprise occurred in 1991. Today, the sailing boats have been replaced by small motor boats, mainly bought by professional fishermen with help from the Northern Province, and a similar journey has become impractical because fuel is too expensive for such a long voyage. Moreover, the possibility of reaching the *Grande Terre* is enormously limited. Waala and Koumac are linked by plane and catamaran twice a week, but these services are cancelled during bad weather. The only way to move (a few) people and (small quantities of) goods is thus on small fishing boats, which can only make the trip to the *Grande Terre* at great risk.

'*Désenclavement*' (opening up) is the keyword of every political speech expressed in Belep or concerning Belep and has quickly entered everyday language. The end of the isolation for which everyone longs refers not only to relationships with the other islands of New Caledonia but also to the interior of the small archipelago. Above all, it involves an attempt to revive ancient connections with ancestral lands, located in the bays of Aar and Phwoc, which were weakened by the creation of the central settlement of Waala.

Collective life in Waala is still organised around the chiefdom and the church: the two institutions that created the village continue to support its cohesion and regularly organise forms of cooperation between groups. The village is also characterised by a dense and lively associative fabric that is undeniably encouraged by proximity. Nevertheless, many Belema feel that this close proximity is excessive, at times unbearable. Both young and old dream of escape from the overcrowded centre and a return to life in their lands of origin, a desire that is fostered by community projects to develop permanent settlements in the cultivated bays (Giordana, 2014a, 2014b).

For many years, Belep was seen as an archipelago lacking resources and with precarious ecological equilibrium, attracting the interest of missionaries, colonial administrators, various merchants, and a few settlers who sought to set up businesses mainly destined to fail due to an insularity that was initially profitable yet increasingly transformed into isolation. The population concentration policy, like all colonial projects in Belep, resulted in a reduction of relationships. This was partly deliberate, a means of distancing the Belema from 'negative' influence and possible interference, but the reduction of relationships was also an undesired effect of the high mortality rate: the number of people was reduced, the groups were reduced,

the islands were reduced, the places and their meanings were reduced (including ancestors and non-human inhabitants). During the second half of the 19th century, entire clans in Belep disappeared, others were adopted, cultivated lands dwindled, relationships with other societies to the north were devastated, and those with Europeans were limited. Later, recognition of the economic and ecological precariousness and fragility of the islands and their inhabitants led to the abandonment of efforts to 'develop' them.

The missionary and colonial projects failed in their attempts to make Belep self-sufficient; however, the causes of this failure were not insularity and lack of natural resources *per se*. They were rather the isolation and reduction of the main resource of the Belema: the possibility to access others. These islands could never be self-sufficient because no island or society ever is. Instead, every island is in relation—in interdependence with—other islands, with other lands.

Conclusions: from centre-periphery logic to an archipelago logic

The islands of Futuna and Belep are similar inasmuch as colonisation transformed them into peripheries, into islands of islands. Futuna and Belep are now using different methods, however, in their efforts to uproot this centre-periphery logic and its dynamics. In Futuna's case, a request for autonomy from the central island Wallis is strongly advanced, with Futunans requesting a direct link with the metropole and the EU. In the case of Belep, the perception of isolation and the desire to escape it leads to an emphasis on reviving the complex relations between islands and their interiors. In both cases, a new configuration is emerging or re-emerging: a reticular archipelagic logic counteracts the fractal and colonial centre-periphery logic. Recent work in island studies has considered archipelagic relationships as an alternative to mainland-centric perspectives (Pugh, 2013; Roberts & Stephens, 2017; Stratford et al., 2011). Archipelagos are by no means 'natural' things but are products of human agency. The archipelagic logic is creative and expansive, and thanks to this, relationships grow. The islands are then considered to be on the same plane as faraway lands, which can also become integral parts of the archipelago.

Recently, European funds have financed the widening of the runway at Futuna's airport and the installation of solar panels on Alofi, where there is no electrical system and where people care for their crops and gardens. The construction of a port at which ships can find harbour in bad weather is also planned with European funding. Futuna's 'archipelago' now extends to Brussels, New Caledonia (home to a large Futunan community), suburban Paris, and towns on the Côte d'Azur. On Futuna, the relationship with the centre-periphery model calls for high schools on their territory, a hospital where women can give birth safely (most women go to Wallis or Nouméa before giving birth), and direct flights to Fiji (thereby avoiding long and expensive transits to Nouméa, via Wallis before being able to take intercontinental flights).

Joël Bonnemaison (1991, p. 119) has argued that Pacific islanders have overcome the limits of insularity by developing a reticular organisation of space: "The island is inhabitable only to the extent to which it is neither the centre nor the suburb, but the element of a course that 'unites' it with the world." A few years later, Epeli Hau'ofa (1993) suggested looking at Oceania not as "islands in a distant sea" but as a "sea of islands." From such a perspective, every island becomes an expanding archipelago, "growing bigger everyday" through that "world enlargement that is carried out by tens of thousands of ordinary Pacific Islanders right across the ocean" (Hau'ofa, 1993, p. 151).

The words of Bonnemaison recall the *chemin* (the path), a widely used metaphor for relationships and social organisation amongst the Kanak. New Caledonia is traditionally traversed by *chemins* that united groups from the *Grande Terre* with the various other islands

of the archipelago. Even today the Loyalty Islands, the Isle of Pines, and Belep are linked with one another and with the central island in this manner through strong ritual relationships.

Many aspects of the policies of New Caledonia in recent decades have been characterised by an attempt to disrupt the fractal centre-periphery logic in various areas, internal and external, in order to revive the logic of the *chemins* and of pluralism. From within, this effort was made in particular through the creation of three administrative provinces, which were instituted following the Matignon Agreements, with a decree dated 24 July 1989. In the Northern Province and Loyalty Islands Province, the majority of the population belongs to the Kanak community. The institution of the three provinces balances the heterogeneous population distribution (concentrated in the south) and the parallel distribution of services, centres of power, and capital, promoting an economic 'rebalancing'. One of the requests from the Kanak community for decolonisation was the creation of a 'second capital', identified as the city of Koné. The recent installation of a mining industry for the extraction of nickel (the country's main natural resource) in the north, on the Koniambo massif, responds to the historical presence of a similar metallurgical plant in the south. This measure also aims to disrupt the logic of the 'centre', of the concentration of wealth and resources in the southern area where Nouméa stands, the '*ville blanche*' ('the white city').

In terms of relationships with the outside world, the disruption of the centre-periphery model occurs through the progressive transfer of state competencies from France to New Caledonia, as foreseen by the Nouméa Agreement of 1998. In 2018, there will be a referendum in which New Caledonia's citizens will be called upon to express their opinion regarding the transfer of the *competences régaliennes*: justice, defence, currency, and foreign affairs. If the response is affirmative, New Caledonia will become a new sovereign state. Jean-Marie Tjibaou, a leader of the independence movement, who was assassinated in 1989, insisted on interdependencies as the keystone of island sovereignty in Oceania: "Sovereignty gives us the right and the power to negotiate the interdependencies. For a small country like ours, independence consists of calculating the interdependencies properly" (Tjibaou, 1996, p. 179). It is not by chance that the cultural policies advanced in recent years by the Jean-Marie Tjibaou Cultural Centre—which has become a reference point for the entire region of Oceania—insist on reviving relationships at the regional level rather than on Kanak identity *per se*.

Like Bonnemaison, researchers who are currently working with climate change and environmental disasters increasingly emphasise the importance of networks (Barnett & Waters, 2016). John Campbell (2009) states that the islands of the Pacific, long considered sites of vulnerability, should instead be recognised as places of resilience. The capacity for 'survival' that these societies have shown, for example by developing specific measures to contain the natural disasters and their effects, are closely linked to relationality: it is relationships that have allowed life on the islands. This is shown by the maintenance of nutritional security through agricultural-ecological diversity (Pollock, 2002), which results in enhanced biodiversity, increased by exchanges between peoples—a biodiversity of plant clones and roots on the move (Haudricourt, 1964; Pollock, 1992). In the words of Campbell (2009, p. 85), "Pacific islands, and their inhabitants, are not essentially or inherently vulnerable. They were traditionally sites of resilience. Colonialism, development, and globalisation have set in place processes by which the resilience has been reduced and exposure increased."

Centre-periphery logic has made the islands of Oceania much more vulnerable. As a result, the decolonisation of Futuna and Belep seems possible through the act of dismantling the centre-periphery fractal model. These islands of islands show us how the reticular model, the enhancement of relationships and reciprocity, and the recovery of their complexity are efficacious against disasters and are a possible way out of colonialism.

Attributions of authorship

Although this article is the result of joint conception and work, Adriano Favole authored the first part ('An anthropology of European overseas islands and territories?' and 'Futuna: a hyper-periphery of Wallis'), and Lara Giordana authored the second part ('Belep: a story of isolation' and 'Conclusions: from the centre-periphery model to an archipelago logic').

References

Adler-Nissen, R., & Gad, U.P. (Eds.) (2013). *European integration and postcolonial sovereignty games: the EU Overseas Countries and Territories*. London: Routledge.

Androus, Z., & Greymorning, N. (2016). Critiquing the SNIJ Hypothesis with Corsica and Hawai'i. *Island Studies Journal*, 11(2), 447-464.

Angleviel, F. (1994). *Les missions à Wallis et Futuna au xix^e siècle*. Bordeaux: CRET.

Barnett, J., & Waters, E. (2016). Rethinking the vulnerability of small island states: climate change and development in the Pacific islands. In J. Grugel & D. Hammett (Eds.) *The palgrave handbook of international development* (pp. 731-748). London: Palgrave Macmillan.

Barrau, J. (1956). *L'agriculture vivrière autochtone de la Nouvelle-Calédonie*. Nouméa : Commission du Pacifique Sud.

Bernabé, J., Chamoiseau, P., & Confiant, R. (1989), *Eloge de la créolité*, Paris: Gallimard.

Bertram, I.G., & Watters, R.F. (1985), The MIRAB economy in South Pacific microstates. *Pacific Viewpoint*, 26(3), 497-519.

Bonnemaison, J. (1991). Vivre dans l'île. Une approche de l'îléité océanienne, *L'espace géographique*, 2, 119-125.

Brou, B. (1982). *Lieux historiques de La Conception, Saint-Louis, Yahoué*. Nouméa: Société d'Études historiques de la Nouvelle-Calédonie.

Burrows, E. (1936). *Ethnology of Futuna*. Honolulu: Bernice P. Bishop Museum Bulletin (no. 138).

Campbell J. (2009). Islandness: vulnerability and resilience in Oceania, *Shima*, 3(1), 85-97.

Clifford, J. (2001). Indigenous articulations, *The Contemporary Pacific*, 13(2), 468-490. https://doi.org/10.1353/cp.2001.0046

Devambez, V. (1989). *Archipel des Bélep (Nouvelle-Calédonie). Essai de monographie historique (1856-1918)*. MA thesis in History. Aix-en-Provence: Université Aix-Marseille I.

Douglas, B. (1972). *A history of culture contact in North-Eastern New Caledonia, 1774-1870*. PhD thesis in History. Canberra: The Australian National University.

Dubois, M.J. (1985). *Histoire résumée de Belep (Nouvelle-Calédonie)*. Nouméa: Société d'Études Historiques de la Nouvelle-Calédonie.

Favole, A. (2014). Terre, politique et parenté à Futuna (Wallis-et-Futuna). In F. Angleviel & M. Abong (Eds.) *La Mélanésie. Actualités et études. Foncier et développement durable* (pp. 207-220). Paris: L'Harmattan.

Favole, A. (2010). *Oceania. Isole di creatività culturale*. Roma-Bari: Laterza.

Favole, A. (2008). Forme e dilemmi del dono a Futuna (Polinesia occidentale). In M. Aria & F. Dei (Eds.) *Culture del dono* (pp. . Roma: Meltemi.

Favole, A. (2007). Démocratie et coutume à Futuna, La Ricerca Folklorica, 55, 109-122.

Favole, A. (2000). La royauté oscillante. Ethnographie et histoire de la cérémonie d'investiture du Tu'i Agaifo d'Alo (Futuna), *Journal de la Société des Océanistes, 111*(2), 195-218. https://doi.org/10.3406/jso.2000.2134

Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

Ghisoni, D., Iopue W., & C. Rabinet (Eds.) (1988). *Ces iles que l'on dit françaises*. Paris: L'Harmattan.

Gilibert, J. (2007). *Un voyage sans retour, de l'Aubrac à la Nouvelle-Calédonie. Journal de Jean Gilibert (1818-1891), missionnaire mariste chez les Kanaks*. Suva: CEPAC.

Giordana, L. (2014a). *Abitare Belep. Etnografia in un villaggio kanak*. Ph.D dissertation in Anthropology. University of Turin.

Giordana, L. (2014b). Waala, l'anomalia di un villaggio kanak (Nuova Caledonia). *L'Uomo Società Tradizione Sviluppo*, 2, 25-44, http://doi.org/10.7386/79672

Gourou, P. (1948). La civilisation du végétal, *Indonesië*, 1(5), 385-396.

Haudricourt, A.G. (1964). Nature et culture dans la civilisation de l'igname: l'origine des clones et des clans, *L'Homme*, 4, 93-104. https://doi.org/10.3406/hom.1964.366613

Haudricourt, A.G. (1962). Domestication des animaux, culture des plantes et traitement d'autrui, *L'Homme*, 2(1), 39-50. https://doi.org/10.3406/hom.1962.366448

Hau'ofa, E. (1993). Our sea of islands. In V. Naidu, E. Waddell, & E. Hau'ofa (Eds.) *A new Oceania: rediscovering our sea of islands* (pp. 2-16). Suva: School of Social and Economic Development, University of the South Pacific.

Kirch, P. (1994). The pre-Christian ritual cycle of Futuna, Western Polynesia, *Journal of the Polynesian Society*, 103, 255-298.

INSEE (2013). *Les populations légales de Wallis et Futuna en 2013*, https://www.insee.fr/fr/statistiques/2121453

Lambert, P. (1855-1875). *Petit journal, 1855-1875*. Typewritten document including *Petit journal de France à Bélep, 1855-1859* and *Petit journal de 1860-1875*. Nouméa: Archives Territoriales.

Laux, C. (2000). *Les théocraties missionnaires en Polynésie (Tahiti, Hawaii, Cook, Tonga, Gambier, Wallis et Futuna) au XIXe siècle. Des cités de Dieu dans les Mers du Sud?*. Paris: L'Harmattan.

Lotti, A. (2010). *Le statut de 1961 à Wallis et Futuna: genèse de trois monarchies républicaines (1961-1991)*. Paris: L'Harmattan.

Naepels, M. (2013). *Conjurer la guerre. Violence et pouvoir à Houaïlou (Nouvelle-Calédonie)*. Paris: Éditions de l'École des Hautes Études en Sciences Sociale.

Panoff, M. (1970). *La terre et l'organisation sociale en Polynésie*. Paris: Payot.

Pollock, N.J. (2002). Vegeculture as food security for Pacific communities. In S. Yoshida & P. Matthews (Eds.) *Vegeculture in eastern Asia and Oceania* (277-92). Osaka: JCAS Symposium Series 16, National Museum of Ethnology.

Pollock, N.J. (1992). *The roots remain: food habits in islands of the central and eastern Pacific since Western contact*. Hawai'i: Institute for Polynesian Studies.

Prinsen, G., & Blaise, S. (2017). An emerging 'Islandian' sovereignty of non-self-governing islands, *International Journal*, 72(1), 56-78. https://doi.org/10.1177/0020702017693260

Pugh, J. (2013). Island movements: thinking with the archipelago. *Island Studies Journal*, 8(1), 9-24.

Roberts, B.R., & Stephens, M.A. (Eds.) (2017). *Archipelagic American studies*. Durham & London: Duke University Press. https://doi.org/10.1215/9780822373209

Roux, J.C. (1995). *Wallis et Futuna: espaces et temps recomposes*. Bordeaux: CRET.

Saillant, F., Kilani, M., & Graezer Bideau, F. (eds.) (2011). *The Lausanne manifesto: for a non-hegemonic anthropology*. Montreal: Liber.

Stratford, E., Baldacchino, G., McMahon, E., Farbotko, C., & Harwood, A. (2011). Envisioning the archipelago. *Island Studies Journal*, 6(2), 113-130.

Tjibaou, J.M. (1996). *La presence kanak*. Paris: Odile Jacob.

Veenendaal, W.P. (2015). The Dutch Caribbean municipalities in comparative perspective. *Island Studies Journal*, 10(1), 15-30.

Island Studies Journal, 13(1), pp. 223-234

Salt marsh synthesis: local politics, local identity perception and autonomy initiatives on Canvey Island (Essex, UK)

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ABSTRACT: Canvey Island, located on the north side of the Thames Estuary, has experienced periodic inundations since its earliest periods of settlement. The island was sparsely populated until the late 1800s when a series of developments, including the construction of fixed links to the mainland, attracted migrants from the East End of London who went on to form the core of the present-day population. The recent and relatively homogenous nature of this migration pattern has led to a local perception of difference from the more established communities of the adjacent Essex shore. The latter factor has contributed to a growing push for local autonomy on the island, which has connected with broader national political trends. The article identifies the manner in which experiences and perceptions of insularity can foster distinct senses of local difference and marginalisation that result in autonomy initiatives at grassroots levels. With regard to the latter, parallels are also drawn with previous local autonomy initiatives in the United Kingdom, particularly those of the Isle of Dogs in 1970. The article also emphasises the role of the imagination and representation of locality in promotional, popular cultural and political discourse that informs senses of community identity in various ways.

Keywords: autonomy initiatives, Canvey Island, local identity, local politics, Thames Estuary

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Introduction

Canvey Island comprises 18.5 km^2 of partially reclaimed alluvial salt marsh on the north bank of the Thames Estuary. Separated from the Essex mainland by a series of creeks, many areas of the island lie below sea level and are only rendered inhabitable by tidal and storm surge defences that protect a population that has grown from approximately 270 in the late 1800s to around 38,000 in 2017.

While the majority of Canvey's community lacks a sustained multigenerational association with the island, a strong local identity has developed that derives from five associated factors: a) a general sense of insularity that is common to island populations; b) an awareness of the island's vulnerability to flooding; c) a sense of working-class solidarity (reflecting the community's identification with London's East End as a point of origin and reference); d) a continuing low socioeconomic profile; and—reflecting all the above—e) a sense of neglect by and marginalisation from local and county governments. These aspects have created variously conflicting and complementary senses of place in promotional, popular cultural and political discourses that are also apparent in one of the area's most notable recent phenomena, the rise of a local autonomy movement. This initiative has substantial points of affinity with broader national political movements, most particularly that of the UK Independence Party and its successful advocacy of 'Brexit' (i.e., Britain's withdrawal from membership of the European Union). Reflecting on these aspects, the following sections outline the historical development of regional autonomy initiatives

within the UK and the manner in which these intersect with the concerns of pro-Brexit lobbyists, profile the historical development of Canvey Island's current community and its representation in locally developed forms of popular culture, and analyse the formation, operation, and key concerns of the Canvey Island Independent Party.

Exit politics and autonomy initiatives

> The people of Canvey voted for Brexit—they would love to Brexit the mainland. (David Blackwell, leader of Canvey Island Independent Party, pers. com., 11 February 2017)

It has been apparent for some time that the United Kingdom (of Great Britain and Northern Ireland) has been anything but united over the last four decades. For that reason, this article will use the term 'UK' throughout when describing the nation state, not just for the convenience of abbreviation of the former term but also as an implicit recognition that the term 'United' is far less appropriate than it may have been at previous historical junctures. As subsequent discussions elaborate, the majority national vote in favour of exit from the European Union (EU) in the 2016 national referendum (decided by 52%-48%) can be read not so much as a confirmation of a united national identity and cohesion, but as its opposite.

While the UK's national fabric may have held together during the days of Empire, the last sixty years have threatened major internal schisms, with a variety of regions pushing for greater autonomy and, in some cases, independence. The most significant of these has been Scotland (which was a separate nation before being united with England and Wales via the 1707 Acts of Union passed by the parliaments of both nations). Despite the defeat of the Scottish Nationalist Party's (SNP) push for full independence in the 2014 referendum (which was defeated 55-45%), the resounding vote in favour of staying in the EU recorded in Scotland (62%-38%) in the 2016 UK referendum has revived the push for Scottish independence. This is because the SNP regard inclusion within the EU as less marginalising than their inclusion within an isolated nation state dominated by England. While the campaign for Welsh devolution has not secured the regional assembly that Scotland gained in 1999 (nor moved into significant calls for total independence), there have been significant concessions from the UK Government in Westminster (most notably in linguistic and cultural terms, such as the establishment of S4C—the Welsh language TV Channel Sianel Pedwar Cymru—in 1982).

At a county level, the Cornish nationalist party, Mebyon Kernow, may not have achieved the increased autonomy within the UK it has desired and campaigned for since the 1970s. But the broader support for and recognition of local cultural factors that it championed contributed to the county receiving what autonomy activists perceived as *de facto* regional recognition within the EU. The latter comprised a Cornish seat in the EU Parliament, established in 1979, and targeted project funding from Brussels. This also assisted recognition of Cornwall's residual Celtic language and related cultural identity (affirmed by the Council of Europe's Charter for Regional for Minority Languages) which resulted in active support by the UK Government in 2014 (marking the first ever recognition of this language and identity at a national level), though such support was abruptly terminated in 2016 in the run-up to the EU referendum. Somewhat paradoxically—and, no doubt, gallingly for autonomy activists—the majority of Cornwall voted for Brexit (56.5%-43.5%) and, thereby, an end to EU support for Cornish projects.

At more micro levels there have also been several autonomy initiatives that have been premised on senses of local difference, marginalisation, and/or nostalgia for low-crime and socially cohesive and conformist pasts imagined to have existed prior to postwar waves of Commonwealth and European migration to the UK. As discussed in Grydehøj and Hayward (2011), a group of associated autonomy initiatives on the Isle of Wight, off the south coast of the English county of Hampshire, exemplify this characterisation. Far from coincidentally, 62% of Isle of Wight voters voted for Brexit. Many aspects of the Isle of Wight's autonomy initiatives derive from a more general sense of island insularity that has been identified and elaborated upon by researchers such as Baldacchino (2006; 2010) and

Hay (2006). As discussed in Hayward (2014), islands—and, particularly, small and low-populated islands—have also been particular centres of variously frivolous or serious (if eccentric) attempts to exit the nation states they operate within and assume independent identities as micro-nations. The impulse for such projects is essentially similar to those discussed above, namely senses of oppression by remote authorities and a desire for local-centric self-management. Two of the most notable of these micro-nations are Forvik, proclaimed on the Shetland island of Forewick Holm in 2008, and Islonia, proclaimed on Dry Island, in the Western Highlands in 2013 (see Grydehøj, 2014; and Hallerton & Leslie, 2015, respectively). Perhaps the most relevant micro-nation for the purposes of this article was the short-lived Isle of Dogs autonomy campaign in 1970.

The Isle of Dogs is an area on the north bank of the Thames in (what is now) east metropolitan London. Despite its name, it is an alluvial peninsula created by a pronounced meander in the Thames as it flows out towards the English Channel. The marsh/heath area in question resulted from drainage of an area in the north of the present-day Isle of Dogs sometime in the 13th century. A small farming community occupied the area until the embankments were breached in 1448, creating the elongated east-west Poplar Gut lake and adjacent regenerated wetland areas. The watery barrier created at the north of the area appears to have generated the term 'island' for the stretch of peninsula to its south. The southern area became further 'islanded' in the early 1800s as a result of the construction of the West Indian docks at the north of the peninsula and the basins that connected the docks to the Thames on the east and west sides. These facilities required bridges to be constructed to link the southern areas to the north bank of the Thames. Settlements grew up to house the dock workers and their families with the result that the area's population grew from 200-300 in the late 1700s to 14,000 by the mid-1800s (Island History Trust). From the late 1800s on, the isolated position of the communities was exacerbated by the frequent activation of swing-bridges to allow shipping in and out of docks, interrupting traffic flows along the eastern and western waterside roads. Local and national authorities were also widely perceived to have neglected the redevelopment of the Isle of Dogs (and other areas of London's East End) following damage caused by extensive German bombing during World War Two. By the late 1960s the population numbered around 10,000 and the sense of neglect prompted Labour Party councillor Ted Johns to lead a group of local activists to attract media attention to the Isle of Dog's plight by making a Unilateral Declaration of Independence (UDI).

The concept of the UDI had risen to the forefront of British consciousness in the late 1960s following British colony of Rhodesia's declaration of UDI in 1965 and the UDIs also announced (unsuccessfully) for the southeastern Ibo area of Nigeria, as Biafra (1969-1970), and for East Pakistan, which gained independence as the nation of Bangladesh in 1971. In addition to these major political upheavals, the concept was invoked by various groups seeking local advantage and/or autonomy. One particular group who picked up on it were local politicians who were increasingly concerned about the lack of support for the Isle of Dogs community from the Tower Hamlets regional council. Seeking traction from the concept, local activists John Westfallen and Ted Johns coordinated the blocking off of road access to the island and ship access to the sea from the docks for two hours on 1 March 1970. The protest group followed up the event by issuing an announcement: "We have declared UDI and intend to set up our own council. We can govern ourselves much better than they seem to be doing. They have let the island go to the dogs" (Bone, 2009).

The combination of the event and its branding as an act of UDI proved highly effective as political theatre. The potency of UDI as a phenomenon in the late 1960s boosted the symbolic aspect of the blockade and attracted major national and international media coverage. This, in turn, secured the campaign's leaders a meeting with UK Prime Minister Harold Wilson to discuss their grievances and prompted a rapid response from Tower Hamlets Council, who announced a series of measures beneficial to the Isle of Dog's inhabitants. Having achieved its goals of publicising local grievances and securing some favourable measures, the movement quickly dissipated and did not continue into an ongoing local political organisation. It nevertheless represented a high-profile and, in the short term, successful intervention into local politics by the population of an area whose peninsular 'almost-islandness' arguably merited more proactive attention from its administrative authority than had previously been the case.

The autonomy initiatives that emerged on the Isle of Dogs in the late 1960s and, as will shortly be discussed, Canvey Island in the 2000s and 2010s, were significantly different from those that occurred on the Isle of Wight between the late 1960s and early 2000s in terms of the class position of the activists and of the island communities more generally. While all three appear to have shared a belief in and abiding affection for a "quintessential Englishness" undisturbed by what they perceive as the intrusion of incomers with different ethnicities and cultural inclinations, many key Isle of Wight autonomy advocates have professed a middle- class worldview and inclinations and a somewhat bucolic vision of their regional abode (Grydehøj & Hayward, 2011, pp. 190-196). In contrast, the most prominent Isle of Dogs and Canvey Island activists have been more oriented to perceptions of the working-class roots of their areas and residents.

Canvey Island: history and context

Within the scenario sketched above, Canvey Island represents a detail within a national quilt whose threads have been stretched in recent decades, distorting individual designs and wrinkling the symmetries necessary for its recognition as a coherent entity. In this regard, the tiny panel at the bottom right-hand corner of the quilt depicting Canvey Island does not so much represent the greater design in micro but rather is one instance of the heterogeneity of elements represented as coherent but currently in a state of crisis. It is also a panel that sits on the edges of one of the quilt's richest and most ornate designs—one whose size and magnificence dominates a large portion but is also oddly out of fit with other parts—that of London, the UK's economic and institutional heart and one of its most established multicultural cities. As the following sections make apparent, Canvey's panel has, in large part, been fabricated from the off-cuts and discarded threads of London's, reflecting the patchwork identity of the island (itself stitched together from earlier fragments of land).

Figure 1: Map of present-day configuration of Canvey.
(*Source:* http://www.canveyisland.net/wp-content/uploads/2010/12/canvey-map.png)

The Canvey area has been subject to visitation, occupation, and resource utilisation since (at least) the Roman occupation of Britain (approximately 55 BCE to the early 5th century CE) and the Roman's development of Londinium as a trade and administrative centre. Early human uses of the island exploited the area's brackish water ecosystems through oyster cultivation and salt evaporation ponds. The island's frequent flooding during annual 'king tides' and as the result of storm surges may have caused some temporary disruption to these activities but was relatively easily

accommodated given that the activities were reliant on estuarine water. With the withdrawal of the Romans, the Anglo-Saxons became the dominant power group in the southeast of England and their settlement at Lundenwick, just to the west of the Roman city, developed as the region's major metropolis. Although smaller in population than the Roman centre, rising from about 10,000 around the 4th century to around 25,000 by the 10th, Lundenwick required reliable provisioning, and from the 5th century onwards sheep were farmed in the Canvey area to supply the city. In this period the area "consisted of a large number of small islands" (Rippon & Wainright, 2011, p. 2). While there is evidence of medieval embankments constructed to prevent flooding, the effects of frequent inundations eventually became so disadvantageous to the agricultural exploitation of the region that in the 1620s local landowners collaborated to address the problem. Inspired by the success of Holland in reclaiming and protecting low-lying areas of land, they employed Dutch specialists to develop protective walls, fill in small waterways, and create drainage ditches so as to produce a stable area for farming. This was a major endeavour, with about 300 Dutch labourers and supervisors being brought in to construct dykes along the coastal margins that delineate today's island. These activities can be perceived as the point at which the unitary space of what is now conceived of as Canvey Island was synthesised (Rippon & Wainright, 2011, p. 2).

The draining and dyke construction also created a distinct identity for Canvey since many of the workers were paid in blocks of land rather than in cash. Many settled and created distinct Dutch-style dwellings and farms. There was, however, a catch to their land grants in that the families were expected to maintain the seawalls for perpetuity. This—and other factors—caused many Dutch settlers to abandon their lands and return to the Netherlands. The seawalls then fell into disrepair. A series of small floods followed in the 1700s and 1800s, causing damage that resulted in temporary *ad hoc* repairs. Despite these periodic floods, the island developed as an agricultural centre in the 1700s and 1800s, predominantly servicing London, which grew from a population of 700,000 around 1750 to 2.36 million by 1850, requiring a significant area of southeast England to service its population. With agriculture being the dominant livelihood occupation, the island had a low population density and a total population of around 270 in the late 1800s.

The major change in the island's socioeconomic base and population density resulted from the introduction of a new industry to the area: tourism. Following the opening of a train line between London and Southend in 1856, the Essex shore became a prime tourism destination for the working-class population of East London, who could (just about) visit the area on a day trip and could more easily spend weekends and short holidays there. Canvey Island was not directly on the rail line but was accessible via ferry from the mainland, and a few adventurous visitors came to experience a quieter, more rural environment than those of the major resort towns. The novelist Robert Buchanan (1901, p. 1) travelled to the island in the late 1890s and wrote about it in his book *Andromeda: an idyll of the great river*, providing a vivid, if not over-flattering, description of the locale:

> Even to-day, when the neighbouring shores of Kent and Essex are covered with new colonies and ever increasing resorts of the tourist, Canvey is practically terra incognita and its one house of public entertainment as solitary and desolate as ever. Flat as a map, so intermingled with creeks and runlets that it is difficult to say where water ends and land begins, Canvey Island lies, a shapeless octopus… and stretches out muddy and slimy feelers to touch and dabble in the deep water of the flowing Thames.

Despite Buchanan's negative perception of the area, other outsiders saw the possibility of capitalising on its environmental assets. The first major project of this kind came in the form of real-estate speculation undertaken by an entrepreneur who sought to profit from the extensive damage to the island caused by a major flood in 1899. Businessman Frederick Hester had a vision of turning Canvey into a lifestyle and holiday destination. Envisioning and marketing the locale as 'Ye Olde Dutch Island', he bought up large areas of farmland, provided basic infrastructure, and then sold plots of land. While the branding of an area of England with a foreign identity was novel in itself, any

sense of association with the Netherlands' highly successful construction and maintenance of sea-dykes would have been advantageous to marketers given the area's recent flooding issues. Using the income from plot sales, Hestor built various amenities and promised various more, including a pier, but ran out of money. One thing he did not invest in was seawall maintenance, and following floods in 1904 and a lack of substantial return on his investments, his business collapsed in 1905. A number of plot purchasers remained, and by 1920 the population reached around 1,800, with this increasing significantly after the Canvey council funded the building of a bridge to connect Canvey Island to the mainland in 1931. This led to the development of leisure facilities along the island's estuary front, including the Casino Ballroom and Amusement Arcade in 1933 and a number of caravan sites, cafes, and shops. The Ballroom was the island's first licensed music venue and featured popular dance bands on weekends and during weekdays in peak holiday season. These leisure amenities served as a major attractor for both tourists and new residents. A significant proportion of both of these groups came from East London, due to interconnected aspects of proximity and convenience, and prior experience of the island as tourists and/or perceptions of the economic opportunities to be had from servicing a demographic with which new residents were familiar. The rapid urban sprawl of London to the east also made Canvey Island attractive as part of a green and estuarine outer metropolitan fringe. Somewhat contrarily, the establishment of a bridge and its road link on to Canvey also enabled other developments.

An oil terminal was built in the southern area of the island in 1936, creating significant employment but also changing the character of parts of the island. The lack of maintenance of the seawall system came back to bite the area in January 1953 when the so-called 'North Sea Flood' occurred. This comprised a coincidence of a high spring tide and a severe storm that caused surges that flooded areas of the coasts of The Netherlands and Belgium and southeastern England as it was funnelled into the narrow stretch of the Straits of Dover. On Canvey Island 58 people died when water surged in, swamping single-storey buildings in low-lying areas. Extensive work was undertaken to remediate the flooded lands and to strengthen and increase the height of the island's protective walls.

Following the extensive rebuilding of island defences and infrastructures, the population re-established itself and both tourism and industry revived—developing rather uneasily alongside and in relatively close proximity to each other. The most significant industrial element was an Anglo-American project intended to make Canvey Island a major fuel importation and processing centre for the United Kingdom. The first delivery came in the form of 2,000 tons of liquid methane imported from Louisiana in 1959. While this looked likely to be a viable operation, its importance was undermined by the discovery of oil and gas reserves off the North East coast of England that provided a cheaper supply option. Further problems followed. An oil refinery was developed but was then refused permission to operate on safety grounds, resulting in a mile-long jetty being built and then abandoned in 1975 and a major area of half-constructed refinery buildings and storage facilities that have remained standing, disused and decaying. As if this factor were not a significant enough problem for the local tourism industry, another new factor emerged in the mid-1970s, the introduction of cheap overseas air travel packages that allowed working-class families to holiday in places such as Spain at relatively low costs (delivering warmer weather and not requiring them to have to try and enjoy themselves in the shadow of decaying industrial infrastructure). As a result, Canvey Island became a place where only the most budget-orientated holidaymakers went, resulting in diminishing profits and limited and highly seasonal employment opportunities in tourism. Low rents and property prices matched the low socioeconomic status of the majority of the island's residents and combined to give the island a very particular social dynamic—a sense of estrangement from the nearby coast, a sense of economic and geographical outsiderness, and an identity that was very dualistic—very much Canvey-centric but also very much centred on the population considering themselves as being migrant East Londoners.

Local sense of place is also worth emphasising. The seawalls erected after the 1953 floods created an unusual landscape where the coast in several areas was hidden behind high seawalls that loomed above the low internal land and where abandoned industrial buildings overlooked relatively

unspoiled creeks, salt marshes, and meadows. Local experience of this paradoxical landscape, and of the low socioeconomic status of the community, were interpreted and represented in a striking form in the 1970s with the formation of local rhythm and blues ensemble Dr. Feelgood and the inscription of the band's oeuvre and associations in a variety of audiovisual representations. While only offering a partial reflection of aspects of local experience in the late 20th and early 21st centuries, the prominence of the band's vision of the island in popular culture and the manner in which it has represented the locality merits consideration within the framework of this article.

The Feelgood factor

Dr. Feelgood was formed in 1971 by four Canvey Island musicians—Lee Brilleaux (lead vocals), Wilko Johnson (guitar), John Sparks (bass guitar), and John Martin (drums). The band was heavily influenced by American rhythm and blues music which they localised with driving rock arrangements, featuring Johnson's highly idiosyncratic riff and rhythm guitar parts, and original songs (mainly written by Johnson) that represented attitudes and scenarios drawn from the highly masculine social milieu from which band members emerged. As British travel writer Chris Somerville (2009, p. 70) characterised:

> The songs he wrote presented sharp cameos of cheerful chancers down on their luck, of cheating girls and hard men, citizens of a harsh yet lively town he called Oil City. Each miniature chronicle came across as pungently and economically as a Raymond Carver short story… In Wilko's Oil City, hard-boiled characters watch the refinery towers burning at the break of day as they wait for some red-eyed rendezvous.

From its beginning, the band was promoted as a regional act with a distinctly regional identity. This was inscribed within the lyrics of the title track of their debut album, *Down by the Jetty* (1975) that, in turn, provided the inspiration for the album's cover image, an atmospheric black-and-white photo of the band looking tough, edgy, unkempt, and wind-blown standing on a jetty with a cargo ship in the background. The band's musical style, lyrical themes, and a particular imagination of place of origin led reviewers and band members to adopt the term 'Thames Delta' to describe Canvey Island and the adjacent Essex coast and, relatedly, the term 'Thames Delta Blues' to describe their sound. The term is, of course, a misnomer. The Thames enters the North Sea via an estuary rather than a delta. But the 'Delta' term was used less in a geographical sense than an allusive one, implicitly aligning the commonly perceived gritty authenticity and invention of Mississippi Delta Blues music typified by musicians such as Robert Johnson, John Lee Hooker, and Muddy Waters (whose material Dr. Feelgood covered in live performance and on record). This particular exercise in place mythologising—which picked up on specific aspects of the locale and represented them as emblematic of that locale—succeeded in creating a particular brand image of the band and their place of origin that has persisted in rock culture and related tourism. The band's particular place mythology was significant in both local and national terms. Locally it performed the somewhat surprising manoeuvre of affirming a distinct sense of community rooted in an East End past with reference to a specifically south eastern US music form and mythology of place. Nationally, the band's oeuvre and iconography was significant for its concentrated inscription and elaboration of local place mythology in songs and associated promotional discourse. Whereas North American culture, for instance, has an extensive body of song lyrics and associated discourse that elaborates place mythology, British popular music has been far more sparing in such references, even when based in a specific location that is prominent in its marketing, such as the Merseybeat Boom of the 1960s (within which prominent inscriptions of place, such as Gerry and The Pacemakers' 'Ferry cross the Mersey' [1965] or The Beatles' more subtly allusive 'Strawberry Fields Forever' [1968] were more the exceptions than the rule.)

Dr. Feelgood's popularity peaked in 1976 when its live album *Stupidity* reached number 1 in the UK album charts and declined after Johnson quit the band in 1977. While lead-singer Brilleaux fronted modified band line-ups until his death in 1994, the band's profile in the 1980s and 1990s was markedly lower. But, if anything, Brilleaux's death served to intensify the band's original mythology and to render Canvey Island a place of cultural pilgrimage for fans. This was nurtured through annual Brilleaux memorial concerts on Canvey island, initiated in 1994, and through annual walking tours of the island run by the band's former manager, Chris Fenwick, in which patrons are shown the locations in which original band members grew up and first performed (and an associated exhibition was also held at the Island's Canvey Club in 2013). Anecdotal evidence also suggests that casual tourist visitation to the island outside of the periods in which these events occur has also been influenced by the area's association with the band in its heyday.

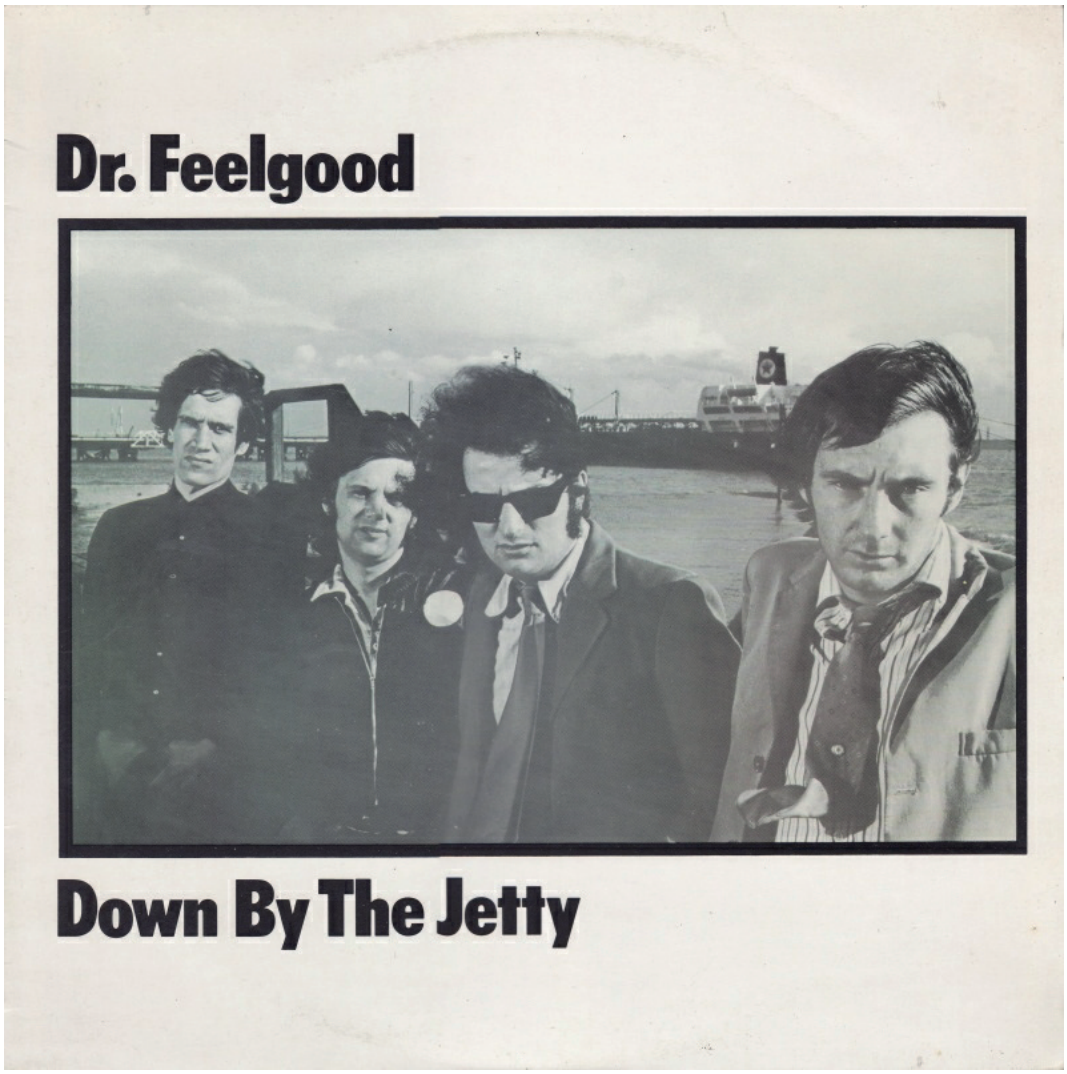

Figure 2: Cover of Dr. Feelgood's debut album *Down by the Jetty* (1975). (© Grand Records)

All of the aspects discussed above were also inscribed and amplified in a 2009 feature-length film about the band and their place of origin directed by Julien Temple entitled *Oil City Confidential*. The film received highly positive reviews and was screened on British national TV and released on DVD. The film is essentially hagiographic, rather than documentary, boosting and enhancing the band's myths of origins in the imagined locale of the film's title, located within the 'Thames Delta' celebrated in the band's songs. Similar aspects were also present in Temple's follow-up

film, *The Ecstasy of Wilko Johnson* (2015). Like any myth, the films' images serve to render place and its history through a particular lens. Both films' renditions of Canvey Island are more akin to a perspective that was in critical vogue in the decade before its production, that of hauntology, which Colin Davis (2005, p. 373) has characterised as "the priority of being and presence with the figure of the ghost as that which is neither present, nor absent, neither dead nor alive." In this regard the 'Oil City' Temple that Dr. Feelgood represented in its songs (and that music tourists come to visit) primarily exists within its own representation. Tourism *to* it is therefore a curious exercise based on re-weaving mythologies of place through visiting and reaffirming the place that inspired those mythologies. Hence the discrepancy with local visions such as those promulgated by the Canvey Island Independent Party, whose place mythologies and senses of investment and performance of space are markedly different in origin, purpose, and articulation.

Perceptions of place, local politics, and associated autonomy initiatives

> *Oil City* gave the impression that we were a large industrial town but in fact we only have two small calor gas sites and Oikos, the refinery that people think is on Canvey Island, is actually the other side of the water. (CIIP founder David Blackwell, pers. com, 9 February 2017)

The above comment, made by the founder of the Canvey Island Independent Party, emphasises the contested nature of representations of place. While Blackwell is correct in identifying that Canvey Island is not an overwhelmingly industrial space, and that the Oikos refinery is on the opposite bank of the Thames, his characterisation of the "small" nature of the island's calor gas sites is relative, as the facilities have a throughput of around 150,000 tonnes of liquefied petroleum per year (Port of London Authority, 2017, p. 88), making them a major supplier of London's energy needs and "one of the main gas distribution centres for the UK" (Floodsite, 2010).

Senses of place and issues of representation have been key to recent political developments on Canvey. Over the last two decades, in particular, there has been growing local resentment against the dissolution of Canvey Island District Council in 1974. This resulted from the implementation of the UK's 1972 Local Government Act that abolished many local level councils in an attempt to streamline local and regional administration. Since 1974 Canvey Island has been included within Castle Point Borough, along with the mainland towns of Benfleet, Hadleigh, and Thundersley. With an approximate 35%-65% split in terms of population and seats, Canvey's voice and concerns became very much minority ones in the new representative body. Continuing local perceptions of the island's distinct local identity and neglect by Castle Point Borough Council crystallised with the formation of the Canvey Island Independent Party (CIIP) in 2004. The party gained immediate electoral success, winning 6 seats in the 2004 Borough elections and going on over the next decade to hold an average 15 of the 16 Canvey Island seats in the Borough (with the Conservative Party holding the rest) and briefly being in power in loose coalition with UKIP in 2014 before the Conservatives regained control of the borough in 2015.

While the 'independent' term in the CIIP's name refers to its independence from established British political parties, it also suggests the party's desire for a greater autonomy for the island it represents. On the CIIP website's main page, for instance, the party's founder and leader makes the following statement:

> During the 1950's and 1960's Canvey Island was a lovely place to live; clean and safe. Where has all of that gone? […] Well it seemed to have started when we joined the main land. (CIIP founder David Blackwell, pers. com, 9 February 2017)

In a similar vein the party's 'chairlady' Grace Watson states:

> I joined this party seven years ago having decided that a change was needed for Canvey Island. I was disillusioned by other parties and Canvey was not looking how I envisaged it would 27 years ago when I moved here […] Starting as an observer for the first year I soon recognised that this party was the one that could bring good changes to our island and I soon found myself asking for your vote one year later… Nobody knows this island better than the people that live here. Share your vision of Canvey with us and one day we may be able to make it a reality. (CIIP founder David Blackwell, pers. com, 9 February 2017)

Similar to the key activists involved in mobilising the various Isle of Wight pro-autonomy groups discussed in Grydehøj and Hayward (2011), leading figures in the CIIP appear motivated by a disillusionment about contemporary socioeconomic and political developments and the lack of representation of and advocacy for local issues provided by mainstream political parties. There are double layers to this disillusionment. Blackwell's opening statement refers to an imprecise historical point when the island can be imagined to have had a stronger sense of singularity and social cohesion (i.e., "before we joined the main land") and also prior to the opening up of the A130 road-link that both lowered travel time from East London and increased traffic on the island. This primarily offers a more 'Edenic' counterpoint to the present-day reality of the location. This is also apparent in the party's stated commitment to the maintenance of effective 'Green Belt' environmental areas and its recognition of distinct local heritage landscapes:

> Canvey Island's Green Belt contains the Historic Landscape created by Dutch Engineers during the 17th Century. Their work to seal Canvey from the sea, and drain the land has left us with a series of dykes and drains forming a pattern work of fields. (Canvey Island Independent Party, NDb)

There is also a strong sense of convergence between CIIP's politics and sense of nostalgia and the politics of UKIP, whose case for Britain's exit from the EU focused on claims concerning the loss of British self-government as a result of membership of the EU, the disproportionate cost/benefit ratio of financial contributions to the EU by UK taxpayers, and a strong desire to limit immigration that might disturb the traditional ethnic make-up of the locale. Reflecting the above-mentioned convergence of interests between UKIP and CIIP, Canvey Island—or rather the Castle Point Borough area—recorded one of the highest pro-exit votes in the UK (74%) in the national referendum on EU Membership. Demographic figures recorded in the 2011 national Census suggest that local concern over immigration did not so much represent any actual demographic shift away from the traditional Caucasian anglophone culture that has dominated the island (with figures showing 99% of the local population as English first language speakers, 97% being born in the UK and 96% identifying as having English, Scottish, Welsh, or Northern Irish ethnicity (Canvey Island Census Statistics, ND) as an anxiety over potential future developments. Despite the concern about migration central to Canvey's strong vote to exit the EU, there is far less local alarm and/or campaigning concerning what is likely to be the most pressing problem for the island in future years, namely the predicted rise in sea levels resulting from global warming and the likelihood of tidal surges variously swamping and/or bypassing existing coastal defence systems. In one of the many paradoxes of the EU's involvements in UK affairs, this issue was a key focus of the Global Change and Ecosystems priority of the EU's Sixth Framework Programme, involving "managers, researchers and practitioners from a range of government, commercial and research organisations, specialising in aspects of flood risk management" (Floodsite, ND). Amongst its findings the Sixth Framework report found that access roads to Canvey Island would likely be cut at peak tidal times with relatively minor rises in sea levels, hampering evacuation of residents from low-lying areas and "could have significant implications for the national economy" given

the major calor gas facilities on the island (Floodsite, 2007). More recent research from the Climate Central Organisation has indicated that almost all of Canvey Island would be submerged with as little as a 2° Celsius rise in global temperatures (see also local media coverage of the story, such as Porter, 2015). While the Canvey Green Belt Campaign has conducted local campaigns over such issues in the late 2000s and early 2010s, there has been limited support from a local population that has shown a far greater inclination to mobilise behind pro-EU exit concerns.

Conclusion

The CIIP's campaign for greater autonomy for Canvey Island reflects a number of factors. The first is the general sense of insularity experienced by islanders internationally and a fairly common perception that their issues and conditions are not sufficiently perceived and/or addressed by mainland-based bodies responsible for their administration and servicing. A second, more highly specific one, is the effective importation of a majority population with pre-existing senses of class solidarity and experience of socioeconomic change and displacement in the post-World War Two era (as areas of the East End of London were variously redeveloped and/or have seen significant influxes of migrants). These two aspects have intersected in an area whose modern origins lie in reconstructions following flooding in 1899 and 1953 and whose seawall defences are plain to see along the south coast. Yet, despite this, there is a low level of local concern about the global climate change and sea-level rise issues on the island and a far greater address to parochial matters on the part of the island's main representative organisation, the CIIP. In this regard, while the CIIP represents and articulates specific aspects of local sensibilities and senses of place in an effective and popular manner, there is a misfit between engagements with the micro- and macro-levels concerning the sustainability of ongoing terrestrial settlement on the island and an absence of voices adequately addressing the key environmental issues involved. Representations of the island, its history, and essential community are called into play to serve the interests of various groups but also exceed such functionalities. Evocations of Dutch settler heritage, East End roots, Edenic island experiences, and/or perceptions of the locale as an 'Oil City' in the 'Thames Delta' all provide partial perspectives on a physical space synthesised from tidal salt marshes that has been in a continual flux since the earliest phases of settlement and looks likely to experience more as the Holocene era progresses.

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References

Baldacchino, G. (2006). Islands, island studies, Island Studies Journal. *Island Studies Journal*, 1(1), 1-18.

Baldacchino, G. (2010). *Island enclaves: offshoring strategies, creative governance, and subnational island jurisdictions*. Montreal: McGill University Press.

Bone, I. (2009). March 1st 1970—Isle of Dogs declares independence!. *Isle of Dogs—past life, past lives*. Retrieved from https://islandhistory.wordpress.com/2013/12/07/it-was-all-a-bit-of-a-joke/

Buchanan, R (1901). Andromeda: an idyll of the great river. Philadelphia: Lippincott.

Canvey Island Census Statistics (ND). Retrieved from: http://canvey-island-south.localstats.co.uk/census-demographics/england/east-of-england/castle-point/canvey-island-south and Ethnic Group statistics at: http://www.ukcensusdata.com/canvey-island-south-e05004087/ethnic-group-ct0010#sthash.l28kuYwT.dpbs

Canvey Island Independent Party (NDa). Website. Retrieved from: http://www.canveyislandindependentparty.org.uk

Canvey Island Independent Party (NDb). Canvey Island history. Retrieved from: www.canveyislandindependentparty.org.uk/canveyhistory

Davis, C. (2005). Hauntology, spectres and phantoms. *French Studies*, 59(3), 373-379. https://doi.org/10.1093/fs/kni143

Floodsite (ND) Executive summary. Retrieved from: http://www.floodsite.net/html/executive_summary.htm

Floodsite (2007) Canvey Island. Retrieved from: http://www.floodsite.net/html/cd_task17-19/canvey_island.html

Grydehøj, A. (2014). Captain Calamity's Sovereign State of Forvik: micronations and the failure of cultural nationalism. *Shima*, 8(1), 34-48.

Grydehøj, A., & Hayward, P. (2011). Autonomy initiatives and quintessential Englishness on the Isle of Wight. *Island Studies Journal*, 6(2), 179-202.

Hallerton, S., & Leslie, N. (2015). Islonia: micronationality as an expression of island livelihood issues. *Shima*, 9(2), 1-8.

Hay, P. (2006). A phenomenology of islands. *Island Studies Journal*, 1(1), 19-42.

Hayward, P. (2014). Islands and micronationality: an introduction. *Shima*, 8(1), 1-8.

Port of London Authority (2017). Handbook 2017. Retrieved from: https://www.pla.co.uk/assets/plahbook.pdf

Porter, M. (2015) 200 years from disaster? Research states Canvey and Southend could sink. *Basildon Canvey Southend Echo,* 11 November. Retrieved from: http://www.echo-news.co.uk/news/14022107.200_years_from_disaster__Research_states_Canvey_and_Southend_could_sink/

Rippon, S., & Wainwright, A. (2011). *Our wetland heritage: an integrated approach towards managing coastal landscapes*. Arts and Humanities Research Council Knowledge Transfer Fellowship project grant, initial report. Retrieved from: https://ore.exeter.ac.uk/repository/handle/10036/3030

Somerville, C. (2009). *Somerville's travels: journeys through the heart and soul of England*. London: AA Publishing.

The Island History Trust (ND). Website. Retrieved from: http://www.islandhistory.org.uk/index.php?p=2

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Revisiting island decolonization: The pursuit of self-government in Pacific island polities under US hegemony

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ABSTRACT: The final years of the Cold War and the following decade led to a short historical intermission in the United States' strategic interest in the Pacific. During that period the Trust Territory of the Pacific was dissolved and three former districts gained their independence as the Republic of Marshall Islands, the Federated States of Micronesia, and the Republic of Palau. The Commonwealth of the Northern Mariana Islands, American Samoa, and Guam, which became unincorporated US territories, remain constitutionally linked to the United States and their political status unresolved. From the legal perspective of the United Nations only American Samoa and Guam are still considered non-self-governing territories and thereby covered by the Special Committee on Decolonization. The return of geopolitical competition to the Pacific due to the rise of China is reviving the question of self-determination in these island polities anew. At the same time, the intention remains to preserve the political and economic links with the United States, calling into question traditional concepts of decolonization. This study will analyze Pacific islanders' current pursuit of self-government under US hegemony, in order to clarify whether or not these islands are still determined by the process of decolonization or are taking different paths.

Keywords: decolonization, island polities, Pacific, self-government, US hegemony

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Introduction

"Is the Pacific a colonial or postcolonial realm?" Matsuda's (2006, p. 780) question serves as a starting point to scrutinize the UN's term 'to be decolonized' for Non-Self-Governing Territories. A first cursory look at historical and current case studies of 'US-affiliated states' (Gallen, 2015, p. 176) in the Pacific reveals three categories of "varying degrees of independence" (Quanchi & Adams, 1993, p. 150): Hawai'i became the 50th state of the United States in 1959. American Samoa and Guam are organized as unincorporated territories, and the Northern Mariana Islands have formed a Commonwealth with Washington, all administered by the Office of Insular Affairs. The Marshall Islands, Federated States of Micronesia (FSM), and Palau have become sovereign states in free association with the United States. 'Island polities' will be used as an umbrella term to cover all of these degrees of independence.

At a first glance, these case studies confirm the differentiation between decolonization in terms of process and self-government in terms of the end-result. Yet, the political developments in the Pacific challenge established definitions of decolonization as a mere "process of imperial dissolution" (Shipway, 2000, p. 3) and the requirement that all hidden aspects of institutional and cultural forces, even after political independence, have to be dismantled (Ashcroft et al., 2007, p. 52). In all cases, a primacy of decisions made at foreign capitals can be acknowledged, but this often did not translate one-to-one on the islands and

had to be negotiated with the Pacific islanders. The United States' political and economic influence in the Pacific island polities remains strong to this day, but at the same time political opposition against its influence has followed a different trajectory in comparison to the wars of independence against the European empires during the decolonization of Africa and Asia. This observation gives an indication of the difficulty in defining the state of decolonization for island polities in the outgoing 20th century and at the beginning of the 21st century.

The UN Resolution 65/119 'Third International Decade for the Eradication of Colonialism' demands that the administering powers of the remaining Non-Self-Governing Territories pursue and implement a course of decolonization as stated by the relevant UN resolutions (United Nations, 2010). In this political framework, the US-affiliated island polities offer diverse case studies which are questioning the concept of decolonization for the Pacific while acknowledging at the same time the power disparities among non-self-governing territories, island states, and administering powers. Baldacchino (2010, p. 190) remarks that "sovereignty does not appear to be any longer the obvious trajectory of peoples who see themselves as dispossessed political entities or at the losing end of federalist developments. In the contemporary world, there may be solid definitive advantages in not being independent." Petersen (1998, p. 199) recognizes in his studies on Micronesia that independence as an either/or matter is a far too inflexible perspective "to explain the nuances of international relations." Thus, in order to abandon "absolute and binary understandings of independence and dependence" (Grydehøj, 2016, p. 106), it is necessary to analyze the degree of sovereignty and control over foreign and domestic matters. Hence, it will be argued that the concept of decolonization remains confined to a historical period and that self-determination, dependency arrangements, and degrees of political independence offer more fitting terms for the political issues of island polities.

This paper's focus on formal legal mechanisms, constitutional issues, international relations, and diplomacy means that, by its very nature, it addresses discussions of 'high politics'. Such an approach cannot help but engage in the discursive framework of metropolitan states and powerful political actors rather than those of people who, for whatever reasons, lack political power at present. This paper's arguments should thus not be interpreted as attempting to represent the rights or voices of Pacific islanders themselves. Its scope is instead limited to legal, constitutional, and diplomatic perspectives from the field of high politics.

Pacific island polities in an era of US expansion and contraction

The relationship between the United States and the Pacific can be expressed from a geopolitical perspective as "expansion and contraction" (Crocombe, 1995, p. 269). US expansion in the Pacific occurred on a step-by-step basis without a grand design to acquire territory. A network of US naval bases was sought by Washington in accordance with Alfred Thayer Mahan's strategy to protect commercial interests and project power if necessary (Mahan, 1935, pp. 27-29). In 1898 the Spanish-American War led to the acquisition of Guam and the result of the Samoan Crisis (1887-1889) extended American sovereignty over Eastern Samoa—later American Samoa (Stayman, 2009, p. 5).

The Second World War fundamentally changed the American presence in the Pacific: after the high number of fatalities among US soldiers in the war against Imperial Japan, the emergence of a vast American Pacific Empire became a possibility. Yet, Franklin D. Roosevelt wanted to avoid following in the footsteps of the European colonial powers and insisted on a regime of trusteeship. Despite Roosevelt's intentions, the historical events led to the undisputed fact that Washington had established a sphere of influence in the Pacific characterized by the four "American flag islands": Hawai'i, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa (Crocombe, 1995, p. 274). The ensuing Cold War underlined once again the military and strategic value of the Pacific islands

for the containment of the Soviet Union. Independence or self-determination were postponed, and a UN Trust Territory of the Pacific Islands (TTPI) was created by the Security Council on 2 April 1947 (Rothermund, 2006, pp. 50-51).

Cocrombe's alternation of the US presence in the Pacific between expansion and contraction is refined by Stayman (2009), who distinguishes between three phases of US territorial policy: Phase one was characterized by the Northwest Ordinance of 1787, which gave Congress the power and flexibility to manage the expansion from 13 to 50 states in the course of 175 years. This flexibility also allowed for the inclusion of non-contiguous territories like Alaska and Hawai'i into the political union. In phase two, at the turn of the 20th century, the acquisition of remote islands in the Pacific on a primarily strategic premise gave rise to the accusation of colonialism, which stood in conflict with America's own historical self-perception, but at the same time not in the way of a growing imperialistic presence abroad. In order to legally clarify the US presence in the Pacific, the Supreme Court decided through the 'Insular Cases' that the United States could acquire territory without the extension of all the benefits of the US Constitution. In due course, the political status of 'unincorporated territory' was created (Stayman, 2009, pp. 5-7). The status of 'unincorporated territory' meant that fundamental individual rights were protected by the Constitution, but "Congress need not extend citizenship nor extend a promise of eventual statehood" (Stayman, 2009, p. 7).

After the Second World War, the territorial expansion halted, and Washington worked with the United Nations to address the political future and development of these Pacific islands. In this third phase, assistance and disinterest correlated with the alternating perception of danger during the Cold War (Stayman, 2009, p. 8). After the Portuguese Carnation Revolution of 1974 ended one of the oldest European colonial empires, scholars like Rothermund (2006) saw the era of decolonization fading away. For the Pacific region, Rothermund's observation of post-1970s relations between administering powers and NSGT are relevant and correspond with Stayman's third phase of the United States' presence in the Pacific: "In some cases this was not due to the die-hard perseverance of the colonial rulers but to the material interests of the colonized. Where they had free access to the metropolitan country and also derived other economic benefits from their continued status as a colony or 'overseas territory', they preferred this attachment to independence" (Rothermund, 2006, p. 44).

This observation leads to the present state of relations between the US and the Pacific islands. The rise of China in the Pacific has put an end to the phase of contraction. President Barack Obama initiated a 'pivot to Asia' which has once again returned the strategic imperative to Oceania. In 2011, together with Prime Minister Julia Gillard, Obama announced the stationing of US Marines and Air Force units in Darwin and the Northern Territory, Australia (White House, 2011). In this era of competition and cooperation between China and the US, the unincorporated territories of American Samoa and Guam, as well as the CNMI and the states in free association with the United States, have to negotiate their political aspirations and economic development. Aside from geopolitical upswings and downturns, interactions between and among American traders, missionaries, explorers, and Pacific islanders have been steadily increasing since the mid-19th century, and today many Pacific islanders live in the United States: whether as migrants, American nationals, or citizens. These social, economic, and historical links are influencing current reflections in the US-affiliated island polities and territories. In particular, the unincorporated island polities exist in a "status limbo" and are lacking a policy-guiding principle. It remains to be seen whether statehood, independence, or free association is their ultimate goal (Stayman, 2009, p. 23).

Revisiting decolonization: theoretical groundwork

The conventional definition of decolonization of earlier scholars saw the fulfillment of decolonization with the withdrawal "of the colonial powers from direct legal and

constitutional control over their territories" (Firth, 2000, p. 314). This definition would allow for only two analytical categories: constitutional arrangements that permitted sovereignty and forms of non-sovereignty. Non-sovereignty in turn can occur in the form of "incorporation by a metropolitan state and semi-autonomy" (Firth, 1989, p. 75). Based on the premise of Alan James's (1986, pp. 24-25) definition of sovereignty—meaning constitutional independence—the freely associated states (Marshall Islands, Federated States of Micronesia, and Palau) cannot be considered sovereign. James's constitutional approach sets aside the possibilities of varying degrees of sovereignty (Firth, 1989, pp. 75-76). While this strict categorization can help to organize international relations into sovereign and non-sovereign entities, it poses an analytical problem: it precludes the possibility of simultaneous chosen political dependence and decolonization. As long as Pacific island states are constitutionally tied to the United States, even loosely through free association, they would have to be considered unfree and thereby not fully decolonized. This approach remains a helpful path for analyzing the constitutional situation in the Pacific, but emanating from Firth's (2000, p. 315) valuable groundwork that "the simple constitutional model of Pacific Islands decolonization […] no longer encompasses the complex reality of the issue," the question lingers: Is the notion of decolonization still relevant for these Pacific islands?

Colonialism is generally characterized, according to Philip Curtin, an Africa historian, by domination of cultural foreigners over indigenous people (as cited in Osterhammel, 2002, p. 19). Osterhammel (2002, pp. 19-21) further refines this definition: colonial rule has to encompass an entire society and rob it of its own historical self-development. Also, foreign rulers show no interest in acculturation but pursue forms of cultural dominance over the colonized. Lastly, colonialism is marked by an ideology to civilize the colonized people, viewing indigenous people as 'savages' or 'barbarians'.

While these are valid aspects of colonial rule, which can further be differentiated into settler colonies, exploitation colonies, plantation colonies, internal colonies, and colonial bases around the world, Jansen and Osterhammel (2013) offer three perspectives on decolonization: 1) a conservative imperial perspective focuses on the decline of empires, and works by Rudolf von Albertini or R. F. Holland have been criticized for a narrow view on events that initiated the end of empire; 2) a local perspective assumes the perspective of colonial or regional actors in their fight for liberation; and 3) an international perspective uses political and diplomatic sources and is characterized by Rothermund as a discrete school of decolonization but actually finds itself in line with the distinguished field of international history (Mar, 2016, pp. 6-9). A fitting critique of the term 'decolonization' comes from Gungwu (2003) and is based on an international perspective of historical events. While it is true that decolonization did not end with the mere transfer of power from the colonizers to the colonized (Frey, 2002, p. 400), the 1970s marked a starting point to call its further use into question. Some studies speak of "continuing decolonization," which leads to the question of whether there are any temporal boundaries. Thus, scholarly works should not ignore Gungwu's (2003, p. 271) criticism that "almost everything could be made to appear to have something to do with the fact that decolonization had not been fully achieved."

Gungwu's observation is supported by the Pacific region's experience of overlapping historical processes from the end of colonial rule to the present: Pacific islanders were integrated into the global anti-communist containment, pursued cooperation through the Pacific Islands Forum, experienced integration in the global economy, and migrated to the metropolitan powers. To ascribe all these historical processes to decolonization would lead to an overworked term that would stretch the meaning of decolonization too far in all directions (Gungwu, 2003, p. 270).

In the following case studies, the questions of decolonization and sovereignty will be analyzed from an international perspective, to take into account the "major structural shift in the international system" (Shipway, 2008, p. 2) since the end of the Cold War. A narrow

constitutional view would lead to the quick and short answer that unincorporated islands and island polities are not fully sovereign. Shipway's (2008) argument to reconcile the bigger international perspective with individual national narratives of former colonies to gain a more complete understanding shall guide the analysis. Baldacchino and Milne (2010) have tackled the difficulty of island jurisdictions, which often defy clear definition. Islands pragmatically respond "to the challenges of a changing global system in concert with their partners. The patterns vary enormously, as do the constitutional choices and options" (Baldacchino & Milne 2010, p. 500). Sovereignty has been diminished by the forces of globalization, decentralization, and supranational integration. As a consequence, some subnational island jurisdictions (SNIJs) have slowed down their pursuit of complete independence.

In the Westphalian sense of state sovereignty, subnational island jurisdictions display "innovative autonomy arrangements that fall short of full sovereignty" (Baldacchino & Hepburn, 2012, p. 556). These "rich breeding grounds for unique adaptations of governance in the modern world" (Baldacchino & Milne, 2006, p. 491) are not easy to categorize, and boundaries between autonomy and sovereignty are fluid. US-affiliated islands in the Pacific are marked by "'hybrid' forms of government" (Levine & Roberts, 2005, p. 279) which reflect the contested issue of sovereignty of these small islands. A hybrid form of sovereignty exists between two intertwined entities with constitutional links or shared jurisdictions while an entity can be said to exist in partial sovereignty when only one or more policy fields are under the control of an outside power. Adapted from research by Baldacchino, Grydehøj, Hepburn, Milne, Levine, and Roberts, this paper attempts to categorize the case studies into hybrid or partial sovereignty in order to question whether the island polities in the Pacific under US hegemony can still be considered to be in a state of decolonization in the 21st century.

The categorization will be guided by three analytical dimensions. Firstly, the hard fact of constitutional sovereignty as Firth (1989, pp. 77-78) put forward will remain a key factor. Secondly, the continuing extent of Washington's informal empire over Pacific islands and island polities can shed light on the remaining decolonization agenda of the UN. And, thirdly, bilateral and regional diplomatic efforts by Pacific island polities can elucidate the degree of political independence. The third aspect is also the latest instrument to analyze the current political situation. The establishment of the South Pacific Forum (renamed the Pacific Islands Forum in 2000) has brought forward a multitude of activities that shape the Pacific region: new institutions of cooperation were created, and regional identity was underlined, giving Pacific islanders a stronger voice in international affairs. Fry and Tarte (2015, pp. 3-4) rightfully assess a profound "transformation of the regional diplomatic culture equivalent to the move from the colonial to the postcolonial era." Put together, all three aspects can deliver a revised position on the decolonization of Pacific islands under US hegemony.

The Commonwealth of the Northern Mariana Islands

Micronesia is aptly described by David Hanlon (1998, p. 1) as "the most peripheral of peripheries." As one of the former districts of the Trust Territory of the Pacific Islands, the CNMI provides a good starting point to "lift a bit the blanket of American domination to see what lies under it" (Hanlon, 1998, p. 4). The UN Trust Territory, which comprised the islands of Micronesia north of the equator, endured from 1947 to 1994. Until the 1960s, it was marked by US disinterest in the development of the Pacific islands, when Washington began pouring "several hundred million dollars in development assistance" (Stayman, 2009, p. 8) into the islands. The Cold War served as a catalyst for monetary engagement and development in the 1960s and 1970s. The massive investment in these tiny islands by the United States, in addition to the offer of US citizenship, influenced the people of the District of the Northern Mariana Islands in 1976 to separate from the TTPI. After two referenda in

1975 and 1977, a Commonwealth of the Northern Mariana Islands (CNMI) in political union with the United States was established.

The political union with the United States brought the CNMI less political independence than the FSM or the Marshall Islands would gain through their negotiations with Washington. Yet, the Commonwealth gained its own local government with some control over immigration. The incorporated status provided the indigenous people with US citizenship and full rights to enter and work in the USA since 1986. It is important to note that the commonwealth construct also gave the people of the Northern Mariana Islands more local governmental influence than they would have had as a federal state such as Hawai'i (Crocombe, 1995, p. 32).

In the covenant between the CNMI and the US, the Northern Mariana Islanders secured an exemption from certain US federal laws that would have changed their cultural concepts of land ownership: as in American Samoa, "non-indigenous persons cannot own land, but may only lease real property from indigenous owners" (Stayman, 2009, p. 20). In 2008, the legislative authority of the CNMI was diminished when federal legislation amended the covenant: until 2008, control over immigration was almost exclusively in the hands of the CNMI, while today federal control over CNMI immigration includes provisions for foreign workers, tourists, and investors. In addition, economic decisions over minimum wage were made by Washington in 2007 and 2011 and not by the Government of Saipan (United States Government Accountability Office, 2011, pp. 45-46, 58-59). These decisions on the federal level show on the one hand the diminished sovereignty of the CNMI over immigration and federal minimum wage, but, on the other hand, these proceedings reflect the integration of the CNMI through its constitutional link with the United States resulting in a form of hybrid sovereignty. The only other covenant of this kind exists between Washington, DC and Puerto Rico.

Presently, the Northern Marianas are experiencing growing tensions between the US and China. Asian tourists and gamblers have discovered the region as a travel destination, and the influx of Chinese money in the form of tourists and development projects has become a major factor for the island economy. At the same time, the US military intends to use Tinian and Pagan as live-fire training sites and is building up its Marine units on the islands (Blades, 2016). These developments reflect the geopolitical competition between China and the US: China's Maritime Strategy, elaborated by Admiral Liu Huaqing, argues for the exertion of sea control out to the First Island Chain (Kyushu, Ryukyu Islands, Taiwan, The Philippines, and Borneo) by 2000 and consecutively to the Second Island Chain (Honshu, Northern Marianas, Palau, and West Papua). This strategy leads to tensions with the US, which established numerous bases in the region after the Second World War to contain the former Soviet Union and protect its allies in Japan and South Korea. The precise objectives of the Chinese Maritime Strategy remain disputed by national security scholars, yet the continuing expansion and modernization of the People's Liberation Army Navy in the South China Sea are unambiguous (Holmes & Yoshihara, 2010, pp. 14-44). In these burgeoning geopolitical tensions, the CNMI constitutes an important part of the informal US empire in the Pacific.

The last decade has seen a rise in intra-pacific diplomacy, and the CNMI was awarded observer status at the Pacific Islands Forum in 2011 (Maclellan, 2015, p. 264). As a consequence, the CNMI today participates in this regional forum as an observer, while the US takes part as a dialogue partner. Although the Northern Marianas' engagement in the Pacific Islands Forum is characterized by a "sense of detachment" based on different colonial histories in the Pacific (Gallen, 2015, pp. 177-180), the status is more relevant than Saipan's current political activity. Participation in the Pacific Islands Forum opens up diplomatic avenues that clash with a conventional understanding of colonialism and decolonization. In this forum, the CNMI can demonstrate its own pursuit of political objectives without close consultations with the former administering power. In the 21st century, the CNMI can

therefore be described to exist in hybrid sovereignty with the US, is part of Washington's informal empire, and is to a degree active in regional diplomacy.

Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau

The Marshall Islands, the Federated States of Micronesia (FSM), and Palau chose a different path from the Northern Mariana Islanders. Driven by aspirations for national sovereignty and full self-government, and in adherence with UN regulations, the remaining three districts of the TTPI achieved independence in free association with the United States (Stayman, 2009, pp. 8-9). All three sovereign states continue to receive US assistance and are part of the US mutual defense system. For analytical purposes, it makes sense to consider all three compact states together because of the similarity of their affiliation. Contemporary commentators appropriately judged the compacts as "instruments of US imperialism" (Boneparth & Wilkinson, 1995, p. 67) because Washington primarily secured military-strategic interests with all three newly independent island states, not accepting a full transfer of power in the field of defense.

In the course of the dissolution of the Pacific Trust Territory, curious and complex international events occurred. The Soviet Union blocked the termination of the trusteeship in the Security Council on legal and political grounds, although local referenda had been held in accordance with UN law. Potentially, Moscow feared the application of such a proceeding on Soviet territory. With the Security Council blocked, the US, UK, and France put the vote before the Trusteeship Council, which could decide by majority voting without a veto. On 28 May 1986, the trusteeship for the FSM and Marshall Islands was terminated, and Palau remained the last part of the Pacific Trust Territory. With the fall of the Soviet Union, the veto threat receded and a Security Council action became possible. At this point, a curious letter from the governor of the CNMI circulated in the UN calling for further UN "protection" against the United States. This letter ran counter to the objective of the South Pacific Forum, which welcomed the termination and supported it outright. In the end, only Cuba voted 'no' in the Security Council on 22 December 1990, ironically citing anti-colonialism to prevent the decolonization of the Trust Territory (Boneparth & Wilkinson, 1995, pp. 62-65).

Palau's independence came later, after the US as administering power insisted on seven plebiscites which in the end overrode the nuclear-free clauses of its constitution. President Salii described the final result as a matter of economic survival due to American pressure and the dependency of his island polity on US funding (*New York Times*, 1987; Roff, 1991, p. 187). After Palau had gained its independence, the relationship between the three compact states and the US changed substantially. All three compact governments have become full UN members and have overcome the argument that microstates lack the resources for self-sufficiency or ability to contribute to UN efforts. This argument was legally discredited by the Principality of Lichtenstein's admission to the UN in 1990 (Boneparth & Wilkinson, p. 66) and argumentatively questionable, because it would negate the possibility of self-determination and independence on economic grounds. Although from a realistic perspective on international relations, hard factors (territory, power, economy, and population) matter, self-determination and identity throughout history have not always been contingent upon these factors. All three island polities have become UN members, the FSM and Marshall Islands in 1991 and Palau in 1994. In a conventional sense, all have passed from an era of colonialism through a phase of decolonization and are now sovereign and independent island states.

However, the free association agreements contain "mutual security pacts which specifically prevented full and final decolonization in the future" (Payne, 1993, p. 121). In addition, the economic dependency between the island states and the US constitutes a tension between the economic benefits for Pacific islanders and their aspirations for further steps

towards decolonization. In the FSM, Marshall Islands, and Palau but also in the US-affiliated territories, the high standard of living for many islanders is connected to outside funding and job opportunities in continental America as well as jobs funded by the United States government. This has led to a paradox of decolonization which further questions the usefulness of the term for contemporary observations: economically, "territories do better than the freely associated states, which in turn do better than independent states" (Firth, 2000, p. 327). As a result, most Pacific islanders seem content with their economic dependency, knowing the constraints island states face. American benefits have become accepted despite wrongdoings in the colonial past and nuclear testing in the Marshall Islands (Henningham, 1995, p. 50), and these social, cultural, and economic ties should be considered as remnants of colonial domination (Borofsky, 2000, p. 304)

In order to delineate decolonization in the FSM, Marshall Islands, and Palau, the past and present critique has to be addressed that all three entities should not be considered independent. After the termination of the trusteeship, all three island polities were granted full self-government and achieved UN membership. Free association with the US and independence now coexist (Petersen, 1995, p. 80). It is a worthwhile observation that "formal independence does not guarantee de facto independence" (Quanchi & Adams, 1993, p. 150), but this is not a problem unique to island states in the Pacific or elsewhere. Small states in international relations generally pursue strategies of integration, bandwagoning, or alliance with relatively stronger states: this holds true for the Baltic States after the fall of the Soviet Union as well as for every other state in pursuit of interests that surpass its capacities. For the FSM, Marshall Islands, and Palau, it is important to note that they became members of the UN as well as the South Pacific Forum "on the basis that they were fully internally self-governing and able to implement Forum decisions within the region" (Henningham, 1995, p. 48).

The current discussion about the possible end or renewal of the compact between the FSM and the US demonstrates the power asymmetry between both actors and the growing Chinese-US competition over influence in Micronesia (Matelski, 2006). The move taken and the language used at the Nineteenth Congress of the Federated States of Micronesia (2015) to end the compact five years earlier in 2018 rather than in 2023 was a reflection on current disputes over federal funding, economic aid, and immigration and tourist visas. The resolution mentions indignation over not being treated as a sovereign equal by Washington, but the text focuses on financial and economic matters. The language cannot be compared to past documents by African and Asian leaders from the 1960s which spoke of 'national liberation' or an 'end to colonialism'. The three island states have become independent actors in regional affairs, and except for control over defense matters, the FSM, Marshall Islands, and Palau exert partial sovereignty over their affairs. Decolonization has become an outworn term in these cases, and mechanisms of international relations can offer more precise results on the questions of political and economic dependence and independence.

American Samoa

American Samoa, together with Guam, is one of the five remaining unincorporated territories of the United States, the others being the Northern Mariana Islands, US Virgin Islands, and Puerto Rico. These unincorporated territories exist in an unresolved political status and theoretically could gain US statehood, become freely associated with, or become independent from, Washington (Stayman, 2009, p. 9). In addition, American Samoa and Guam are the only two island polities in US affiliation which are still on the UN list of Non-Self-Governing Territories and are under the observation of the UN Special Committee on Decolonization (or Committee of 24), established in 1961 to monitor the implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples. Carlyle Corbin, UN expert on self-determination of island polities, argues that such "political dependency

arrangements are clearly within the purview of the international decolonization process" (United Nations, 2010b, p. 1).

In 2002, the government of American Samoa in Pago Pago wanted to be struck off that list, because independence was not a political goal (Rothermund, 2006, p. 44). In 2015, however, the desire was expressed to remain on the list. In a document from 13 June 2013 entitled 'Decolonization issue regarding American Samoa', the current position of the government in Pago Pago becomes clearer: the American Samoan governor underlined that American Samoa was not a colony but a United States territory. Although "being part of the United States family was really a matter of self-determination" (United Nations, 2016, p. 6), the governor expressed the real reason for staying on the decolonization list at the same time: "Until the people of American Samoa had exercised their right to determine for themselves their future political status, it was perhaps best that American Samoa remained on the United Nations decolonization list" (United Nations, 2016, p. 7). No rash actions were demanded because American Samoans benefit economically from their status as US nationals, which allows them to work or reside anywhere in the United States—but are not allowed to vote in the US elections. The comparison to West Samoa (today, the Independent State of Samoa), which became independent in 1962, is telling: American Samoa's neighbors in Savai'i and Upolu have a lower per capita income and lower educational standard (Crocombe, 1995, p. 273).

The terminology of 'decolonization' seems to be questionable for the case of American Samoa: American Samoa is a part of the United States—although unincorporated—but substantially self-governing and, so far, part of the United States by self-determination. There seems to be neither consent nor a firm intent by its population to become fully independent, which casts doubt on key elements of colonialism and the initiation of conventional decolonization. Pago Pago does not fight against domination by cultural foreigners or to gain full constitutional sovereignty. Although American culture influences individual lifestyles, American Samoans retain their laws and cultural norms and govern themselves. What Pago Pago is missing is adequate political representation to shape jurisdiction with regard to its economic situation. Pago Pago sends only one delegate to the US Congress who has no voting rights, and final authority over American Samoa rests with the US President and the Department of the Interior. As a result, American Samoans can vote on their constitution, but it needs to be approved by the US government (United Nations, 2015, p. 7).

Clearly, American Samoa is not fully independent, and its sovereignty is in question. Yet it is self-governing and pursues its political objectives—first and foremost, the clarification of American Samoa's political status. At the UN decolonization seminar in Nicaragua, American Samoa's governor Lolo Matalasi Moliga acknowledged the beneficial relationship with the US but stated that "its current political status as an unincorporated and unorganized US territory is neither sustainable nor economically secure" (RNZ, 2015). Moliga mentioned full independence, free association, a commonwealth, or an organic act as possible solutions for American Samoa's future. In pursuit of these objectives, Moliga has established the Office of Political Status, Constitutional Review and Federal Relations. The new department is integrated into the governor's office and looks "at issues such as self-determination and the pros and cons of further integration with the United States, including citizenship and representation in Congress" (RNZ, 2016).

American Samoa's affirmation to remain on the UN list of Non-Self-Governing Territories was triggered by "vagaries" in Washington, as mentioned in the governor's official statement, after accepting the invitation to the UN seminar on decolonization in Nicaragua. The statement is less an attack on the close relationship between American Samoa and the US but rather a strong demand for more control over policy areas that are important to Samoans. One example is the opposition of the American Samoan government to the legal fight of some of its citizens (Tuaua v. United States) to gain full US citizenship "on the ground that it would threaten their cultural practices" (Ponsajune, 2016). Another example is free

trade agreements into which the United States entered and that in turn affected American Samoa (UN, 2016, p. 7): "Whether the territory is delisted or not […] we are exposed to actions of Congress affecting us in ways not contemplated because of our tiny land area, located in a large ocean, thousands of miles from the continental US, and economic circumstance" (Pireport, 2016).

The dependency on two tuna canneries for job generation has made American Samoa vulnerable and keeps the islands in financial and economic dependency on US funding, especially since one of the canneries has now closed (Associated Press, 2016). This development shows the fundamental constraints island polities are facing and underlines the difficulty of the term decolonization in an interconnected global economy in connection with historical processes. In terms of American Samoa's political aspirations, one could use 'decolonization' in a classical way to describe the absence of a complete transfer of power from the administering power to the indigenous government. Yet American Samoa's political status complicates its application: on the one hand, American Samoa could claim unfinished decolonization because a foreign power still influences its constitutional and economic affairs; on the other, American Samoans have become active agents in negotiating their own political status as part of the US political system.

Pago Pago will probably pursue a path for greater sovereignty in certain policy fields, for example in economic matters, but remain a part of the United States. One can expect a process of "internal constitutional evolution" (United Nations, 2010b, p. 2) which could result in an even closer integration with the US through an organic act or commonwealth status. An indication of Pago Pago's burgeoning desire for a more autonomous political status is displayed by its observer status in the Pacific Islands Forum and its intention to become a full member. Having received an invitation for full membership, which has recently been achieved by the French territories of French Polynesia and New Caledonia, Governor Lolo Moliga stated that "American Samoa wants to strengthen ties with its Pacific neighbors but also its association with the United States" (Pireport, 2016b).

American Samoa's experiences illustrate how the issues of decolonization can gradually flow into regular political negotiations when questions of liberation or nationalism stop playing a decisive role. The economic challenges of island states and constraints on self-sufficiency in a modern world challenge the outworn term even more. While the process of decolonization recedes, Pago Pago's relationship with Washington can better be characterized to be in a state of hybrid sovereignty.

Guam

Guam, the largest island of the Marianas, remains firmly in a state of "imperial limbo" (Fojas, 2015, p. 168) and is defined by tourism and militarism. As part of the strategic island trio with Hawai'i and the Philippines, Guam constitutes an essential asset for the US military in the Pacific. The US Navy exercised undisputable powers until 1950, when a civilian government with separation of powers and a bill of rights was established by the Organic Act of Guam, and the local population gained US citizenship. After 277 years under the rule of three different imperial powers, this move by the United States seemed in accordance with the general idea of decolonization. Guamanians' citizenship, though, can still be revoked by Congress, and since 2009 a military buildup has led to a retransfer of economic and political power to the US military (Fojas, 2015, pp. 167-170). Guam is dominated by the US military, and its self-government is only marginally developed, underlining the case that Guam's decolonization remains imperfect.

In Guam, the contest between the indigenous population and American interests is a question of land and self-determination of the local Chamorro people; in Firth's useful differentiation, decolonization in Guam is to be considered redistributive and culturally

assertive (Firth, 2000, p. 315). The notion of political or constitutional independence remains considerably unlikely because of Guam's strategic value in the past and because of the present growing geopolitical competition between China and the US (O'Keefe, 2015, p. 127). In 1994, Joseph F. Ada, former Governor of Guam, introduced himself to the Clinton Administration as "Governor of the American colony of Guam" and expressed Guam's desire to end its colonial status (Firth, 2000, p. 330). In 1997, the Legislature of Guam set up a Commission on Decolonization "to educate the people of Guam of the various political status options available, should Guam be allowed to pursue a change in its political status and relationship with the United States" (Tolentino, 2014). According to Principle VI, laid down by UN Resolution 1541 (XV), whether or not a Non-Self-Governing Territory has reached self-government, Guam should be able to choose freely between independence, free association, or integration (United Nations, 1960). Washington's past behaviour towards the successor states of the Pacific Trust Territory indicates that comprehensive independence is neither a real option nor a goal pursued by Guamanians who overall want to remain US citizens.

On account of Guam's strategic value, Washington has been mainly hesitant and obstructive in letting the indigenous population determine their political status. In a political dimension, the Chamorros are not fully decolonized. Cultural, social, and economic dimensions are more blurred because of the small size of the island and its enmeshed history with the United States: for some residents, a continuing connection between colonialism and militarization exists, while others cherish the benefits of the historically grown relationship (Letman, 2016). Against this backdrop, the intention remains to stay to some degree affiliated with Washington. Guam demanded more autonomy during the Clinton and Bush administrations and introduced a bill for commonwealth status (Crocombe, 1995, p. 272), which could lead to complete internal self-government, return of federally held property, and influence on the application of federal legislation on Guam, similar to that of Puerto Rico or the CNMI (Henningham, 1995, p. 61).

The bill's failure has been attributed to the definition of 'self' in self-government. While officials in Guam insist on the "residual sovereignty of the Chamorro people," the administrations in Washington have rejected the bill on the grounds that it would exclude the settler population from voting on Guam's future political status (Quimby, 2014). With Chamorros in the minority, the inclusions of all Guamanians—all legal residents of the island—in a future plebiscite would discard the concept of the Chamorros' exercise of residual sovereignty in their self-determination. This highlights some of the problems identified by Androus and Greymorning (2016) with respect to differential assessments of sovereignty on the parts of settler populations and indigenous islanders.

The leeway Washington gives to Guam is imperfect and incomplete, demonstrating a classic centre-periphery relationship from the colonial era, because Washington deliberately postpones local self-determination and obstructs a possible Commonwealth with Guam. Yet, there are signs that Washington shows some intent to adhere to the principles laid down in Article 73 of the UN charter. At the Pacific Regional Seminar on Decolonization in Managua in 2016, it was noted that for the first time in recent memory Washington met its obligation to grant $300,000 to the government of Guam for political status education (United Nations, 2016b). Guam also exercises a small measure of self-government by sending a non-voting delegate to the US Congress—which constitutes a first but not final step towards political self-determination. More importantly, Washington has not infringed upon Guam's path to participate in regional diplomacy. Like American Samoa and the CNMI, Guam attained observer status in the Pacific Islands Forum in 2011 (Maclellan, 2015, p. 264).

The relationship is further complicated by the impact of settler colonialism over the course of Guam's history, and the influence of the US military constrains substantially the ability of local communities to influence political processes (Natividad & Kirk, 2010, p. 2). Whether or not the support of education on Guam's future political status in 2016 was a

goodbye present from President Obama or the beginning of a real renegotiation between Washington and the government in Hagåtña remains to be seen. Presently, Guam remains in a strongly diminished status of hybrid sovereignty, with heavy constraints on self-government. The power disparity and few policy fields in which Chamorros can exercise sovereignty characterizes this remaining colonial relationship.

Conclusions

"The simple constitutional model of Pacific Islands decolonization […] no longer encompasses the complex reality of the issue" (Firth, 2000, p. 315). Firth's assessment and research on the state of decolonization at the turn of the 21st century and the diverse application of the term remains a solid theoretical basis for current observations about the Pacific. The variety of approaches to decolonization in Oceania exacerbates the difficulty of the term. Decolonization in its ideological form has lost its momentum in the US-affiliated island polities of the Pacific because ideas about national liberation and the fight against colonialism do not coincide with the political strategies of Pacific islanders at this stage of history. Sovereignty in the form of independent statehood is not at the top of the demands in American Samoa or Guam, and today "many Islanders in territories no longer want to be decolonized" (Firth, 2000, p. 331). The FSM, Marshall Islands, Palau, and the CNMI have all gained independence and remain in varying degrees connected to Washington through forms of hybrid and partial sovereignty. For these island states, decolonization in its full, constitutional meaning would result in a loss of federal funding, a drop in their standards of living, and would tear apart the interconnected history and economic ties of the past. The absence of full constitutional sovereignty, though, should not be considered as an obstacle to analyze the state of decolonization in the Pacific. Historians of island-centred histories are well advised to heed Aldrich's assessment that independence or the lack thereof is not "the logical end-point of decolonization" (Aldrich, 2000, p. 174).

Based on Firth and Aldrich's observations, Oceania has arrived in a "postdecolonial era" (Firth, 2000, p. 332). According to Osterhammel's categorization, Washington protects its interests either through some form of informal empire (second grade) or a non-colonial but dominant approach (third grade) —the first grade being outright formal empire. The Federated States of Micronesia, the Marshall Islands, and Palau would nearly fit into the third category, but the special treaties reserved for the US in security issues keep these islands partially integrated in America's informal empire (Osterhammel, 1995, pp. 25-26).

Especially Guam's history and further political status are marked by an American imperial approach. At the same time, the path of internal political evolution in American Samoa and Guam in constitutional links with the US blurs the lines between informal empire and emerging autonomous forms of government: in both cases, developments could result in a commonwealth with the US, free association, or theoretically statehood like Hawai'i. Their common path seems to be further integration with the US in economic and political dimensions, while asserting cultural independence and far-reaching self-government, resulting in and expanding their state of hybrid sovereignty.

In the Pacific, as in Africa and Asia, "huge inequalities remained as the dynamic of world politics. But colonial rule disappeared" (Darwin, 2000, p. 7). American Samoa and the CNMI, as well as the states in free association, are good examples of this transition—without excluding the bitterness over nuclear testing on the Marshall Islands or the strong influence on the formulation of Palau's constitution. The pursuit of autonomy without full sovereignty by these island polities corresponds with the observation that "the relationship between colonial and postcolonial is not a dialectical one" (Baldacchino, 2010, p. 196). Guam constitutes the remaining hard case, where the term decolonization could still be applied, due to the incomplete process of self-determination of the Chamarro people.

The US-affiliated island states underline the unsuitability of the term decolonization for the contemporary Pacific. Gungwu's observation of the history of Southeast Asia is transferrable to Oceania: the "American role in the international relations of the region is much greater than anything that the word 'decolonization' can conjure up" (Gungwu, 2003, p. 273). Due to Washington's economic and military strength, as well as interest in the region, it exerts a strong influence on its smaller partners, all of which have chosen some form of affiliation with Washington. The contemporary situation can thereby best be described as a typically asymmetric relationship pattern in a postcolonial diplomatic system (Osterhammel, 1995, p. 26; Fry & Tarte, 2015, p. 4).

An international approach, based on constitutional and political dimensions, has been criticized for its focus on decisions made in the metropolitan power, because it neglects the perspective of the indigenous population (Mar, 2016, p. 9). In order to revise and question the application of the concept of decolonization in the cases of US-affiliated islands, the statement of the Dutch historian Henk Wesseling rings true: "Decolonisation has finished. It definitely belongs to the past. Yet somehow it has refused to become history" (ctd. in Thorn, 2000, p. 4). The US-affiliated islands—especially Guam—show the persisting residue of the process of decolonization in the framework of Washington's informal empire in the Pacific. While the centre-periphery relationship and the political and economic asymmetric dependence on the US remains, statehood, free association, and territorial status "represent historical and constitutional alternatives to independence rather than failures of decolonization" (Aldrich, 2000, p. 174). The "hybrid jurisdictions" (Levine & Roberts, 2005, p. 279) are a path for contemporary island polities in US-affiliation to achieve a high degree of self-determination, notwithstanding their limited resources and relatively weak international positions. For American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Marshall Islands, the Federated States of Micronesia, and Palau, decolonization has above all become a historical term and unfitting for the new relationships that have emerged in the Pacific since the 1970s and the demise of the Trust Territory of the Pacific islands in 1994.

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References

Aldrich, R. (2000). The decolonisation of the Pacific Islands. *Itinerario*, 3-4(24), 173-191. https://doi.org/10.1017/S0165115300014558

Androus, Z., & Greymorning, N. (2016). Critiquing the SNIJ hypothesis with Corsica and Hawai'i. *Island Studies Journal*, 11(2), 447-464.

Ashcroft, B., & Griffiths, G., & Tiffin, H. (2007). *Post-colonial studies: the key concepts*. Abingdon: Routledge.

Associated Press. (2016). Tuna cannery in American Samoa to halt production. 13 October. http://www.staradvertiser.com/2016/10/13/business/business-breaking/tuna-cannery-in-american-samoa-to-halt-production/

Baldacchino, G., & Hepburn, E. (2012). A different appetite for sovereignty? Independence movements in subnational island jurisdictions. *Commonwealth & Comparative Politics*, 50(4), 555-568. https://doi.org/10.1080/14662043.2012.729735

Baldacchino, G. (2010). 'Upside down decolonization' in subnational island jurisdictions: questioning the 'post' in postcolonialism. *Space and Culture*, 13(2), 188-202. https://doi.org/10.1177/1206331209360865

Baldacchino, G., & Milne, D. (2006). Exploring sub-national island jurisdictions: an editorial introduction. *The Round Table*, 95(386), 487-502. https://doi.org/10.1080/00358530600929735

Blades, J. (2016). US military plans present difficult balancing act for Marianas. *RNZ*, 22 August. http://www.radionz.co.nz/international/pacific-news/311582/us-military-plans-present-difficult-balancing-act-for-marianas

Boneparth, E., & Wilkinson, J.M. (1995). Terminating trusteeship for the Federated States of Micronesia and the Republic of the Marshall Islands: independence and self-sufficiency in the post-Cold War Pacific. *Pacific Studies*, 2(18), 61-77.

Borofsky, R. (ed.). (2000). *Rememberance of Pacific pasts*. Honolulu: Hawai'i University Press.

Crocrombe, R. (1995). *The Pacific Islands and the USA*. Honolulu: East-West Center.

Darwin, J. (2000). Diplomacy and decolonization. *The Journal of Imperial and Commonwealth History*, 3(28), 5-24. https://doi.org/10.1080/03086530008583096

Firth, S. (2000). Decolonization. In R. Borofsky (ed.). (2000). *Remembrance of Pacific pasts* (pp. 314-332). Honolulu: Hawai'i University Press.

Firth, S. (1989). Sovereignty and independence in the contemporary Pacific. *The Contemporary Pacific*, 1-2(4), 75-96.

Fojas, C. (2015). *Islands of empire: pop culture and US power*. Austin: University of Texas Press.

Frey, M. (2002). Drei Wege zur Unabhängigkeit. Die Dekolonisierung in Indochina, Indonesien und Malaysia nach 1945. *Vierteljahreshefte für Zeitgeschichte*, 3(50), 399-433.

Fry, G., & Tarte, S. (2015). Pacific diplomacy and decolonisation in the 21st century. In G. Fry & S. Tarte (eds.) *The new Pacific diplomacy* (pp. 3-19). Acton, Australia: ANU Press. https://doi.org/10.22459/NPD.12.2015

Gallen, S.L. (2015). In G. Fry & S. Tarte (eds.) *The new Pacific diplomacy* (pp. 175-188). Acton, Australia: ANU Press.

Grydehøj, A. (2016). Navigating the binaries of island independence and dependence in Greenland: decolonisation, political culture, and strategic services. *Political Geography*, 55, 102-112. https://doi.org/10.1016/j.polgeo.2016.09.001

Gungwu, W. (2003). The limits of decolonization. In M. Frey, R.W. Pruessen, & T.T. Yong (eds.) *The transformation of Southeast Asia: international perspectives on decolonization* (pp. 268-275). Armonk, NY: M.E. Sharpe.

Hanlon, D.L. (1998). *Remaking Micronesia: discourses over development in a Pacific territory, 1944-1982*. Honolulu: University of Hawaii Press.

Henningham, S. (1995). *The Pacific Island states*. London: Macmillan Press. https://doi.org/10.1057/9780230372436

James, A. (1986). *Sovereign statehood: the basis of international society*. London: Allen & Unwin.

Jansen, J.C., & Osterhammel, J. (2013). *Dekolonisation: Das Ende der Imperien*. München: Beck. https://doi.org/10.17104/9783406654657

Letman, J. (2016). Guam: where the US military is revered and reviled. *The Diplomat*, 29 August. http://thediplomat.com/2016/08/guam-where-the-us-military-is-revered-and-reviled/

Levine, S., & Roberts, N. (2005). The constitutional structures and electoral systems of Pacific Island states. *Commonwealth & Comparative Politics*, 43(3), 276-295. https://doi.org/10.1080/14662040500304866

Mahan, A.T. (1935). *The influence of sea power upon history, 1660-1783*. Boston: Little, Brown & Co.

Maclellan, N. (2015). Pacific diplomacy and decolonisation in the 21st century. In G. Fry & S. Tarte (eds.) *The new Pacific diplomacy* (pp. 263-381). Acton, Australia: ANU Press. https://doi.org/10.22459/NPD.12.2015.21

Matsuda, M. (2006). Ocean-based histories: the Pacific. *The American Historical Review*, 3(111), 758-780. https://doi.org/10.1086/ahr.111.3.758

Mar, T.B. (2016). *Decolonisation and the Pacific: indigenous globalisation and the ends of empire*. Cambridge: Cambridge University Press.

Matelski, T.R. (2016). America's Micronesia problem. *The Diplomat*, 19 February. http://thediplomat.com/2016/02/americas-micronesia-problem/

Natividad, L.L., & Kirk, G. (2010). Fortress Guam: resistance to US military mega-buildup. *The Asia-Pacific Journal*, 8(19), 1-17.

New York Times (1987). Palau drops nuclear-free status. *New York Times*, 7 August. http://www.nytimes.com/1987/08/07/world/palau-drops-nuclear-free-status.html

Nineteenth Congress of the Federated States of Micronesia, Third Special Session. (2015). C.R. NO.19-155. http://www.fsmcongress.fm/pdf%20documents/19th%20Congress/RESOLUTIONS/CR%2019-155.pdf

O'Keefe, M. (2015). The strategic context of the new Pacific diplomacy. In G. Fry & S. Tarte (eds.) *The new Pacific diplomacy* (pp. 125-136). Acton, Australia: ANU Press. https://doi.org/10.22459/NPD.12.2015.11

Osterhammel, J. (2002). *Kolonialismus. Geschichte - Formen - Folgen*. München: Beck.

Payne, A. (1993). The politics of small state security in the Pacific. *The Journal of Commonwealth & Comparative Politics*, 31(2), 103-133. https://doi.org/10.1080/14662049308447658

Petersen, G. (1998). Strategic location and sovereignty: modern Micronesia in the historical context of American expansionism. *Space and Polity*, 2(2), 179-205. https://doi.org/10.1080/13562579808721779

Petersen, G. (1995). Why is Micronesian 'independence' an issue? In B. Lal & H. Nelson (eds.) *Lines across the sea* (pp. 69-83). Brisbane: Pacific History Association.

Pireport. (2016). American Samoa to participate in UN decolonization seminar. 31 May. http://www.pireport.org/articles/2016/05/31/american-samoa-participate-un-decolonization-seminar

Pireport. (2016b). American Samoa looks at becoming full member of Pacific Islands Forum. 22 September. http://www.pireport.org/articles/2016/09/22/american-samoa-looks-becoming-full-member-pacific-islands-forum

Ponsajune, C.D. (2016). Are American Samoans American? *New York Times*, 8 June. http://www.nytimes.com/2016/06/08/opinion/are-american-samoans-american.html?_r=0

Quanchi, M., & Adams, R. (eds.) (1993). *Culture contact in the Pacific*. Cambridge: Cambridge University Press.

Quimby, F. (2014). Guam Commonwealth Act. http://www.guampedia.com/guam-commonwealth-act/

RNZ. (2016). American Samoa agency to review constitutional matters. 21 April. http://www.radionz.co.nz/international/pacific-news/302062/american-samoa-agency-to-review-constitutional-matters

RNZ (2015). American Samoa addresses UN decolonisation meeting. 21 May. http://www.radionz.co.nz/international/pacific-news/274227/american-samoa-addresses-un-decolonisation-meeting

Roff, S.R.. (1991). *Overreaching in paradise: United States policy in Palau since 1945*. Juneau: Denali Press.

Rothermund, D. (2006). *The Routledge companion to decolonization*. London & New York: Routledge.

Shipway, M. (2008). *Decolonisation and its impact: a comparative approach to the end of the colonial empires*. Malden: Blackwell.

Stayman, A. (2009). *US territorial policy: trends and current challenges*. Honolulu: East-West Center.

Thorn, G. (2000). *End of empires: European decolonisation 1919-80*. London: Hodder & Stoughton.

Tolentino, D. (2014). Commission on decolonization. http://www.guampedia.com/commission-on-decolonization/

United Nations. (2016b). Speakers urge administering powers to address impact of nuclear testing, military build-up in Pacific territories, as regional decolonization seminar continues. GA/COL/3291. 1 June. http://www.un.org/press/en/2016/gacol3291.doc.htm

United Nations (2016). Special committee on the situation with regard to the implementation of the declaration on the granting of independence to colonial countries and peoples: American Samoa. A/AC.109/2016/1. 3 March. http://www.un.org/ga/search/view_doc.asp?symbol=A/AC.109/2016/1

United Nations (2015). Resolutions adopted by the General Assembly on 9 December 2015. A/RES/70/102 A-B. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/102

United Nations (2010b). Pacific regional seminar on the implementation of the Second International Decade for the Eradication of Colonialism. assessment of decolonization process in today's world. PRS/2010/DP.6. http://www.un.org/en/decolonization/pdf/dp_2010_corbin_7.pdf

United Nations (2010). Third international decade for the eradication of colonialism, resolution 65/119 adopted by the General Assembly on 10 December 2010. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/65/119

United Nations. (1960). Principles which should guide members in determining whether or not an obligation exists to transmit the information called for under Article 73e of the Charter. https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/153/15/IMG/NR015315.pdf?OpenElement

United States Government Accountability Office – GAO (2011). American Samoa and the Commonwealth of Northern Mariana Islands. Employment, earnings, and status of key industries since minimum wage increases began. Washington, D.C/ GAO-11-427.

White House, Office of the Press Secretary. (2011). Remarks by President Obama and Prime Minister Gillard of Australia in Joint Press Conference, Parliament House. Canberra: 16 November.

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Implications of tourism development on islets: Ilot Bernaches, Mauritius, as a destination management case study

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ABSTRACT: Many islands promote their destinations by including islets that surround them. Conscious of the competitive tourism market, the move is based on the need for tourism diversification. Islets are endowed with unique flora and fauna, and when included in the tourism package, islets receive considerable prominence in the gaze of tourists looking for authentic experiences. Mauritius Island has not lagged behind in adopting this trend. Studies show that islets surrounding Mauritius are major tourism assets, but these seem to have received insufficient attention in tourism studies. The current study uses Jordan's core-periphery model to investigate Ilot Bernaches, one of the popular islets of Mauritius. The uniqueness of this study is two-fold: first, it seeks to investigate implications of tourism development at Ilot Bernaches, and second, it makes a case for setting up an islet management authority. The research design is based on a mixed methodology. The major findings reveal that Ilot Bernaches has potential to diversify the existing tourism product and adds value to the Mauritian tourism product. The study discusses destination management implications, makes recommendations regarding tourism development at Ilot Bernaches, and sets the groundwork for further studies of islets in tourism. It is recommended that an islet management authority be established to help cope with core-periphery tensions.

Keywords: core-periphery model, destination management, tourism development, Ilot Bernaches, islands, islets, Mauritius

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Introduction

Many islands promote their destinations by including islets that surround them. This decision is based on the need for diversification, as islands suffer scarcity and hence lack diversity in their tourism resources (Carlsen, 1999; Gowreesunkar & Rycha, 2014; King, 1993). Conscious of the competitive tourism market, islands are increasingly upgrading the quality of their tourism product by emphasising their uniqueness through niche marketing of islet tourism. Islets are endowed with unique flora and fauna as well as endemic and exotic resources, and when they are included in tourism packages, islets receive considerable prominence in the gaze of tourists looking for authentic experiences. Because islands worldwide have similar tourism products, whenever they perceive

a new way to diversify their tourism offer, they do not hesitate to follow trends from more successful and established destinations (Gowreesunkar & Rycha, 2014). Mauritius, a small island state in the Indian Ocean, is no exception. According to Ramessur et al. (1998) and Smith et al. (2004), islets surrounding Mauritius are major assets for the local tourism industry. As such, islets surrounding Mauritius such as Ile aux Aigrettes, Ilot Benitier, Ilot Cerf, Ile d'Ambre, and Ilot Bernaches are capitalised upon by tourism operators to supplement the conventional tourism package.

Following this line of argumentation, the island of Mauritius provides an interesting case study of tourism development on one of its popular islets, the Ilot Bernaches. At present, there appears to be a lack of academic papers on the islet, despite its contribution to diversifying the Mauritian tourism offer (Gowreesunkar & Sotiriades, 2015). The few available studies on Ilot Bernaches are mainly based on coastal resource management (Ramessur, 1998, 2002), flora and fauna management (Smith et al., 2004), and biodiversity conservation (Maureemootoo & Towner-Maureemootoo, 2002). We could find no stand-alone study of tourism development at Ilot Bernaches. Using a mixed methodology approach, the present research attempts to investigate the implications of tourism development at Ilot Bernaches. In so doing, it aims to contribute to the body of meta-literature in the area of islet tourism. Since it is beyond the scope of this study to investigate all the tourism islets of Mauritius, the present study chooses Ilot Bernaches, for the following reasons:

1. Ilot Bernaches has grown in popularity for recreation and tourism (Smith et al., 2004 Ramessur, 1998, 2002) and there is thus a need to understand the implications of tourism activities on the islet;

2. Recent studies have reported sustainability threats endured by most islets surrounding Mauritius, including Ilot Bernaches (Maureemootoo & Towner-Maureemootoo, 2002).

3. Interviews with regulatory bodies (Ministry of Tourism and Leisure and the National Coast Guard) and other stakeholders (skippers and fishermen) confirm the need for a survey regarding tourism development on the islet.

In line with these current developments, the main research questions that guide the study are:

1. What is the potential of Ilot Bernaches as a tourism islet?

2. What are the limiting factors of Ilot Bernaches?

3. What are the destination management implications for further tourism development at Ilot Bernaches?

The remainder of the paper is structured as follows. First, a review of the literature on islet tourism is conducted. The empirical study is then analytically presented, providing the profile and context of the investigated islet (Ilot Bernaches). The implied research methodology is explained, and the findings are presented. This is followed by a discussion of destination management implications. The study will attempt to make few workable recommendations and propose suggestions for future research.

Literature review

Islets as a tourism component

Island attraction as a tourism component is not a recent phenomenon (Conlin & Baum, 1995), but what is recent is the interest tourism promoters now show in islets surrounding larger islands. According to Dygico et al. (2013), islets are uninhabited landforms with minimal vegetation lying offshore larger islands. Islets have the world's most delicate ecosystems, with unique flora and fauna, and their aesthetic qualities (geographical location, topographic view, and climate) contribute to enhancing tourism experiences. In a competitiveness study undertaken by Pestana et al. (2011, p. 142), it was found that, besides comparative advantage and price, variety in the tourism offer counts in the competitiveness race. This point is also shared by Barros and Alves (2004), who contend that areas that are richly endowed with tourism attractions display a comparative advantage over others that do not. A further study conducted by Cave and Brown (2012) on 36 islands shows that, as island destinations approach maturity, the cultural or natural asset resources upon which the product is based can be destroyed in the process of expanding, rebuilding, or repositioning the product. Islets are therefore more vulnerable compared to islands (Andriotis, 2004; Gowreesunkar & Rycha, 2014), and they are more prone to sustainability threats due to their size, topography, and carrying capacity (Carlsen, 1999; Sharpley, 2001). Islet environments therefore experience the effects of tourism perhaps more severely than island destinations. This is the case because development on an islet can be spread or mitigated due to distance from centres of governance, regulatory mechanisms, infrastructure planning, and formal control (Mycoo, 2006). While it has been recognised that tourism development has impacts (Ballantyne et al., 2011; Dwyer, 2010; Lee et al., 2013), many of those impacts manifest in a subtle and often unexpected manner (Mathieson & Wall, 1992). For instance, in the absence of control, tourism activities like exploitation of vegetation, overfishing, flower picking, trampling (Alessa et al., 2003; Bruyere et al., 2011; Lee et al., 2013), intimidation of small animals, plucking of fruits, and crushing of birds' eggs destroy the environmental resources upon which the islet depends. As such, islands often lose their appeal in the process of tourism exploitation, and islets, as an immediately available resource, are frequently used to develop potential niche and destination positioning strategies. Examples of islets utilised in island tourism packages include, among others, Penguin Islet (Tasmania), Thomson Islet (Queensland), Palawan Islet (Philippines), Chumbe Islet (Zanzibar), Ile aux Deux Cocos (Rodrigues), and Ile aux Aigrettes (Mauritius).

The core-periphery model

A study conducted by Jordan (2007) shows that islands can be seen in the context of the core-periphery model of development, where the main island (core destination) is the primary tourism destination and islets represent elements of the periphery. One of the defining features of the core-periphery relationship is the idea of domination of the periphery by the core, which is viewed as the place where administrative, cultural, and economic power resides and is seen as the decision-making nucleus separated from the periphery. The core-periphery model indicates that there might be some commonalities between a core destination where the infrastructure and institutional framework are in place and the periphery where separate, different, or no institutions exist and that there is limited communication between the core and the periphery. The study by Jordan (2007) was based on twin-island states of the Caribbean, namely Antigua and Barbuda, Trinidad and Tobago, and St. Kitts and Nevis. The findings of this study show that the internal core-periphery relationships have contributed to conflicts between key public sector organisations responsible for tourism policy-making in the countries under study. Thus, devising suitable governance structures for geographically separate territories (in the context of a common sovereignty within the framework of a unitary state) is highly problematic. Consequently, the study shows that solutions must be sought that take into account the complex interplay between the psychological impact of the shared history and the insights derived from modern theories of governance.

The logic behind the core-periphery model has also been reflected in a study conducted by Gowreesunkar (2013) on the island of Mauritius. It was found that tourism regulating bodies in Mauritius (Tourism Authority, Beach Authority, and Mauritius Tourism Promotion Authority) were also experiencing core-periphery relationships, and consequently there was a duplication in the roles enacted by them. For instance, licensing, inspections, and monitoring were undertaken by three regulators, namely the Beach Authority, the Tourism Authority, and the District Council. Similarly, while safety and security at the beach ought to be the responsibility of the tourism police, the function was also fulfilled by the Beach Authority and the National Coast Guard. Therefore, regulators were found to be duplicating the work of their partners without a common vision, and the core-periphery relationship was apparent in the dominant roles exerted by certain tourism regulatory bodies over the others. Crouch and Ritchie (1999) postulate that a destination that has a tourism vision, shares the vision among all the stakeholders, has management that develops an appropriate marketing strategy, and has a government that supports the tourism industry with an efficient tourism policy may be more competitive than one that has never asked what role tourism is to play in its economy. This type of tourism administration influenced by the core-periphery relationship logic has arguably weakened institutional arrangements for tourism in Mauritius and the key tourism organisations.

Gap in the literature

The gap on islet tourism literature has been identified at both international and local levels. From an international perspective, tourism studies on islets are scarce, as most researchers choose to investigate islands, given that, by now, island tourism studies have gained increased prominence worldwide and have thus become a researchable field of study. In contrast, despite being part of the tourism package, many islets surrounding islands are inadequately researched. For instance, many tourism studies undertaken in the Aegean and Mediterranean islands (e.g., Andriotis, 2008; Sharpley, 2001; Spilanis & Vayanni, 2003; Sterren, 2007) focus on main islands like Crete, Santorini, Majorca, Malta, Canary, Rhodes, and Paros while islets such as Nea Kameni, Palaia Kameni, Archi, Chalki, Dragonada, and Elassa in the Aegean alone are not investigated. It is thus observed that whenever an islet is under the sovereignty of another land, research conducted on the islet is usually undertaken in conjunction with the mainland. Likewise, in the context of the current study, existing tourism studies on Mauritius emphasise the mainland but not the islets (e.g., Gowreesunkar & Rycha, 2014; Prayag et al., 2010; Seraphin et al., 2013). Moreover, available studies on islets of Mauritius are researched from the context of the mainland. For example, studies by Ramessur (1998, 2002) and Maureemootoo and Towner-Mauremootoo, (2002), discuss islets in a general manner but do not consider the tourism aspect.

Figure 1: Island of Mauritius with surrounding islands. (© Gowreesunkar et al., 2015)

Empirical study

Mauritius and its islets

The Republic of Mauritius (Figure 1) is composed of four islands of the Indian Ocean, namely Mauritius, Rodrigues, Agalega, and St. Brandon (Cargados, Carajos, and Shoals), as well as 46 offshore islets. Mauritius is the principal island and has a land area of 720 square miles.

The area of study, which is Ilot Bernaches, is less than 2 acres in size and is illustrated by Figure 2. The islet is made up primarily of coralline sand with some coral outcrops and is surrounded by mangrove trees and rocks. Ilot Bernaches comprises considerable endemic and exotic resources that appeal to visitors. For instance, rare birds (Tourterelle, Perdrix, and Pic Pic), butterflies, rabbit and pine trees, palm trees, mangrove, berry trees, flowers, and tropical fruit trees represent the flora and fauna of the islet. The islet is so small that it takes around 30 minutes to walk around it. There are some beautiful stretches of sandy beaches, and the islet is often visited by tourists and locals. The rest of the islet's beaches are made up of rocks and boulders. The islet is accessible from two main embarkation points of Mauritius (Bain de Rosnay and Goodlands) and from the Poudre D'or public beach, and it takes around 35 minutes to reach the islet. Ilot Bernaches is mainly popular for its beach and sea activities. Ordinary boats, catamarans, speedboats, and pleasure craft are the means of transport utilised to reach the islet.

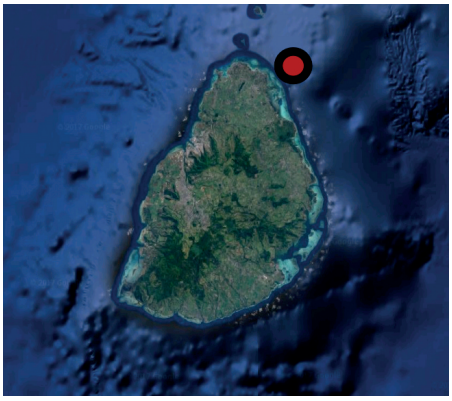

Figure 2: Main island of Mauritius, marking Ilot Bernaches. (Source: © 2017 Data SIO, NOAA, U.S. Navy, GEBCO, Landsat/Copernicus, Data LDEO-Columbia, NSF, NOAA, Map data ©2017 Google.)

Methodology

The study utilised a mixed methodology based on a range of well-rehearsed arguments about the advantages of mixing methods (Nunkoo et al., 2013). The primary data was therefore derived from structured interviews (with regulators and trip operators) and semi-structured questionnaires (for visitors) whilst secondary and tertiary data were obtained from the Internet, online articles, the Ministry of Tourism and Leisure, the Tourism Authority, the Ministry of Environment, the National Coast Guard, and the Mauritian Wildlife Foundation. Initially, it was decided to utilise questionnaires for both target populations, but upon realising that this might deviate trip operators from their duties, it was decided to choose structured interviews. Semi-structured questionnaires were chosen for visitors as they had a waiting time for boats to take them back to the mainland. Prior to the main survey, questionnaires were piloted on 10 academic colleagues who had an educational tour with their students to Ilot Bernaches.

Sampling plan

Visitors on the islet and trip operators (skippers, fishermen, boatmen, tour operators) accompanying visitors to the islet comprised the sampling frame. Convenience sampling was the preferred technique for both target populations as no *a priori* sample design could be established.

Various reasons accounted for this: first, it was difficult to predetermine the number and category of visitors for the day as trip operators were unwilling to disclose information; second, it was impossible to establish in advance whether trip operators would be willing to participate in the survey. Due to the difficulty in reaching trip operators and their clients, a 'first available' formula was adopted, whereby the first trip operator willing to undertake the survey was approached. According to tour operators working on a full-time basis at Ilot Benaches, the number of visitors to the islet suffered some level of fickleness, as in the case of any destination. It was therefore difficult to establish the weekly population of visitors at Ilot Bernaches. For instance, during a specific week, the islet might receive as many as 60 visitors, whereas during the next week, the islet might hardly receive 20 visitors. The reasons for these fluctuating numbers included school holidays, bank holidays, weekends, peak season, and other occasions like birthday celebrations, anniversaries, and festivals. Arguably, the islet received more visitors if those occasions arose during a given week. Based on these arguments, it would be plausible to suggest that if the highest sample of visitors is taken (that is, 18), the weekly sample representativeness is acceptable, being 30% of the population.

Data collection phase

Data collection took place in three phases and was spread over a period of seven months (February to August 2014). The first phase involved the writing of actual empirical instances of the islet under study. Two tasks were performed during this stage. The first task related to familiarisation with trip operators (tour operators, fishermen, skippers) conducting trips to Ilot Bernaches. Thus, during the first month (February 2014), a visit was conducted to the site, and casual conversations were engaged in to elicit information on the trip operation (number of trips conducted daily, frequency of trip, timing). This was helpful for establishing the research plan. Moreover, a structured informal interview was held with representatives of the Ministry of Tourism and Leisure, the Mauritian Wildlife Foundation, and the National Coast Guard so as to validate this line of study and establish areas of concern about the islet. The second task was to acquire firsthand knowledge about the islet, and this was undertaken separately. The researcher visited and explored the islet as a visitor and was involved in a non-participant form of observation. The second phase related to questionnaire administration. Questionnaires were administered twice a week from March 2014 to August 2014 (24 weeks). This was the most difficult phase since the researcher had to be involved in a tedious exercise of scrutinising which boat could be suitable for her trip to and from the islet. Moreover, some uncertainties were involved in the process. For instance, approval had to be sought from operators, and this could only be obtained on the spot. Moreover, the researcher was charged a fee for the travel cost, which varied from Rs 200.00 (US$6) to Rs400.00 (US$12), depending on the category of boat. Given that the survey was on a weekly pattern, trip operators became familiar with the researcher, and by the 20^{t}h week, the survey was conducted with less difficulty. To gain better insight into the visiting pattern of the islet, the survey schedule was organised on a weekday and on a weekend. Most visitors preferred to fill in the questionnaires on their own in order to keep themselves busy, and from the feedback obtained, it was found that Section 5 (open-ended questions) engaged more interest relative to the other sections. In total, 233 visitors completed the questionnaire.

The third phase of the survey related to structured interviews conducted on 10 trip operators, and it was purely qualitative. Those operating catamarans and pleasure craft on behalf of hotels were unwilling to participate in the survey. The fact that they were employed by hotels or had contractual agreements with hotels and business groups probably explains the refusal. The interviews with trip operators were therefore conducted on the way back to the mainland as, at this moment, visitors were tired and quite passive, thus leaving tourism operators relatively free to engage in conversation with the researcher. Interviews lasted until the end of the journey (approximately 30 minutes) and took place in the form of casual conversation. It was impossible to make audio recordings of the conversations as boats engines were too noisy. As a result, notes were taken.

Data analysis and response

The study generated 233 completed questionnaires from visitors and rich qualitative data from 10 trip operators, representatives of regulatory bodies, and the Mauritius Wildlife Association. However, six questionnaires from visitors were not properly filled out and were thus not usable for the analysis. Table 1 details the number of surveyed visitors.

Table 1: Number of visitors interviewed.

Weeks	Week Day	Week End	Total
Week 1 (March)	3	5	8
Week 2 (March)	4	7	11
Week 3 (March)	3	2	5
Week 4 (March)	2	5	7
Week 5 (April)	5	10	15
Week 6 (April)	5	7	12
Week 7 (April)	6	4	10
Week 8 (April)	3	3	7
Week9 (May)	5	5	10
Week 10 (May)	1	3	4
Week 11 (May)	3	4	7
Week 12 (May)	3	6	9
Week 13 (June)	3	9	12
Week 14 (June)	5	10	15
Week 15(June)	5	7	12
Week 16 (June)	4	4	8
Week 17 (July)	4	3	7
Week 18 (July)	1	3	4
Week 19 (July)	6	9	15
Week 20 (July)	4	4	8
Week 21 (Aug.)	2	4	6
Week 22 (Aug.)	3	6	9
Week 23 (Aug.)	6	12	18
Week 24 (Aug.)	6	8	14
Total	**92**	**141**	**233**

The table shows that most visitors were reachable during holidays and the summer period. There were more visitors on weekends and public holidays compared to normal weekdays. Data was analysed using the SPSS version 8.0. Close-ended responses were numerically coded and analysed whilst qualitative responses from open-ended answers and interviews were triangulated with quantitative data to detect reliability.

Limitations

Major difficulties of the study related to limited information regarding the islet (size, number of visitors, regulating bodies, and carrying capacity of the islet). Identifying the appropriate stakeholders who could provide information on the islet was the most difficult phase of the study. The limited literature on islet tourism presents a limitation and gaps highlighted in the study might thus suffer from shortcomings. Moreover, due to high transportation costs, the survey was limited to just two days per week.

Discussions

Ilot Bernaches as a tourism islet

Environmental qualities are important for tourism and have a positive impact on overall tourism experience (Kirillova et al., 2014). Regarding the current study, the overall findings indicate that the islet has the required environmental qualities to enhance the tourism offer. The islet comprises a peaceful, lush green atmosphere, with many trees and various endemic birds and butterflies beautifying the environment. However, the selling factor of the islet remains the beach and sea activities (snorkeling, fishing, parasailing, diving). The following quotes from a young South African couple and an older Indian tourist support this:

> "This place is a delight for beach activities and we spend our whole day parasailing; there is no crowd, no disturbance, and we practise our sea activities the way we want without anyone imposing conditions on us."

> "I come here just for the beach. It is not polluted with people and bottle. In Mauritius, there is not enough place to swim at good beaches."

> Interviews with skippers and tour operators were somewhat congruent with those of visitors but these were mainly judged from a business perspective:

> "We capitalise on beach activities at Ilot Bernaches, as in Mauritius, the beaches are too crowded and our clients do not like it."

> "Here, we do business the way we want; the islet is ideal for making barbecues and picnics; we are far away from the mainland, and we have no interference on the way we organise our day package."

Overall, the lack of control seemed to be an encouraging factor for both visitors and trip organisers to use the islet the way they felt appropriate. This observation concurs with an earlier observation by Cave and Brown (2012), who argue that, away from centres of governance, regulatory mechanisms, and infrastructure planning, tourism operators and tourists do not utilise tourism resources responsibly. Regarding the visiting time, it was found that most visitors spent an average of 4-5 hours on the islet, whereas in a few cases, groups of people stayed overnight for camping purposes. The normal time for a day visit spanned from 10:00 to 15:00, and mixed findings reveal that the islet receives an approximate range of 150-200 visitors on weekdays and 250-350 visitors on weekend days.

Limiting factors of the islet

The first limiting factor of the islet was the hazardous embarkation point from which trip operators picked up and dropped off visitors. This was captured in the words of Capitaine West, one of the trip operators:

> "Many times my clients get injured when they trying to get out from the boat. The embarkation place has too many rocks, and these are slippery."

Some visitors expressed the same concern:

> "We are a group of 5 and my mother is 70 years old. When we came in the morning, the skipper carried her till the beach; now we will be embarking again to go back to Mauritius; it is yet another problem."

From trip operators, the following points were raised:

> "Authorities should look for another embarkation point or enlarge the existing one so that it can accommodate two to three boats at a time; during weekends, boats have to wait in queue to drop off visitors as it is too narrow here."

The next limiting factor unanimously shared by visitors and trip operators (including representatives of authorities) was the need for a toilet. Taking into consideration the number of visitors on the islet and their visiting time (4–5 hours daily), serious reflection was given to the amount of raw sewage visitors could generate in the absence of toilet facilities. During the preliminary visits, some parts of the islet could not be visited due to the bad odour. A specific question was politely formulated to gain insight into how people on the islet coped with the call of nature. The following responses were obtained from trip operators:

> "We go inside the bush; we have no choice."

> "When I have to follow the call of nature, I do it in a private corner and I cover it with sand."

Visitors also lamented the lack of toilet facilities, but most of them refused to comment on the way they managed to heed the call of nature. A family of six men and three boys were spotted camping on the islet for a weekend, and when asked the reasons for such gender-based camping, they collectively answered the following:

> "Ladies cannot stay here for too long as there is no toilet. For a man, it is easier to manage."

A further limiting factor was the lack of potable water on the islet. This in turn suggested that visitors and trip operators had to carry water to the islet. Findings reveal that, when leaving the islet, many visitors did not carry back their empty bottles with them, and other visitors lamented on the following issues:

> "There is no waste disposal here and I am responsible enough to put all my garbage in a plastic bag and carry it back with me; I don't think all others have done the same; I can't see them carrying their empty bottles and boxes."

> "Bins should be placed everywhere; else the islet will become a garbage land."

> "I have to carry back dirty nappies; it is very embarrassing; bins should have been arranged; we have paid for a package and we have neither toilet nor bin; is not worth the money spent on the package."

Some visitors expressed concern over kiosk and bench facilities and suggested the following:

> "If few benches and kiosks could be introduced, to protect from rain."

> "We are seniors citizen and after some times, we want to sit on a chair or a bench; our bones are too old to sit down on the beach. Thanks that the skipper brought this plastic chair."

Carrying capacity of the beach-front

According to Mathieson and Wall (1992), carrying capacity is the maximum number of people who can use a destination without an unacceptable alteration to the physical environment, an unacceptable decline in the living environment of the community, and an unacceptable decline in the visitor

experience. Carrying capacity is usually examined from physical, geographical, psychological, social, cultural, and economic thresholds. At present, there is limited experience in applying carrying capacity to islands due to the inherent methodological difficulties in arriving at unique figures (Apostolopoulos, 2012, pp. 141-142): There are too many elements that come into play to specifically determine the actual desired, and acceptable thresholds, and measuring each threshold requires expertise in diverse environmental, social, and economic fields. Thus, determining carrying capacity at a tourism destination is a complex exercise. At the outset, the calculation of carrying capacity is dependent on basic information like the size, length, and width of the islet. Regarding the current study, no information could be retrieved on the carrying capacity of the islet. Reports available on Mauritius and surrounding islets mainly offer status of flora and fauna, number of species at risk of extinction, status of biodiversity, and agricultural biodiversity but do not give any indication on carrying capacities. Whenever the concept was referred to, it was always treated as a lost element among other variables, and there was no quantified information on numbers, percentage, or tolerance level (see for example, Prayag et al, 2010).

Thus, available reports have been utilised as a foundation for the present study. Given that no information could be retrieved regarding length and width of the islet, the help of the National Coast Guard Officer was solicited. With the help of a measuring tape, the approximate length and width of Ilot Bernaches was calculated. The islet has approximately 150 metres of sandy beaches and is 180 metres long, with a width of 160 metres. This measurement recognises that there are physical limits to the number of visitors that can be accommodated on the beach. Given that there is no control over the number of visitors, tourism operators organise trips without any agreed consensus on the number of visitors, and they operate in isolation. Consequently, findings revealed that visitors were unhappy about sharing their space when there was overcrowding on the islet. These were mainly highlighted by visitors, whereas trip operators refused to comment:

> "When we arrived in the morning, the islet was empty; now we feel like going away after the arrival of the catamaran with its 40 passengers; there is no place anymore for us on the beach."

> "I am a fussy kind of person; I would refuse to sit too close to strangers. I cannot share my space with others as I have paid to enjoy this beach."

The exceeded physical threshold explains the current situation. The physical capacity of a destination or site is determined by availability of space, the form of the landscape, and the carrying capacity of the land. It recognises that there are physical limits to increasing tourism numbers. For the present case, if 1 m^2 of beach is earmarked for 1 visitor, and a 1 metre physical distance is maintained between one visitor and his co-occupant on the beach, it would imply that approximately 2 m^2 space could be earmarked per visitor. Thus, the carrying capacity of the beach is somewhat dictated by length of the beachfront. According to this calculation, the beach at Ilot Bernaches can accommodate a total of 75 people at a time, and going beyond this number would imply exceeding the carrying capacity of the beach and hence impacting negatively on the quality of the visitors' experience. If this number is reconciled with the approximate number of visitors on weekdays (150-200 visitors) and on weekend days (250-300 visitors), it is assumed that the physical carrying capacity of the beach at Ilot Bernaches has been exceeded. This point gives room for reflection.

Destination management implications

The present study shows that Ilot Bernaches is exploited for its tourism and recreational resources, whereas tourism needs to protect the very resources upon which it depends (Sharpley, 2001). Trip operators organise trips without controlling the number of visitors and types of tourism activities. Carlsen (1999) observes that uncontrolled tourism in island cases is more fatal than on a big continent.

In the absence of control, many destinations do not develop within the framework of sustainability, and they lose their future appeal (Andriotis, 2004). For example, Ile-à-Vache and Ile aux Tortues (islets of Haiti) have lost their authenticity due to lack of control from regulatory bodies (Botti et al., 2008).

Regarding Ilot Bernaches, government ownership over this piece of land means that the government has a responsibility to ensure that the bio-physical resources of the islet are not placed at risk. Recognising that sustainability of the islet depends on preserving its attractive features, lower density tourism development should be aimed for, with less capacity usage, thus generating less adverse environmental impacts. Islands are now focusing on upgrading the quality of their tourism product, and lessons from successful island destinations show that the integration of islets into the tourism package can become a tool for destination differentiation and that this addition to the tourism portfolio can create a distinction between existing destinations and attract new markets (Scherrer et al., 2009). Examples abound: Singapore has reinvented itself as a conventions destination through careful destination positioning and marketing (MacLaurin&Litvin, 2001), whilst Cyprus is using values of quality and sustainability, and cultural and social heritage in its destination renewal campaigns (Soteriadeset al., 2007). Tenerife in the Spanish Canary Islands (Rodríguez Barroso, 2007) and Ios in Greece (Stylidiset al., 2008) have chosen to differentiate themselves on the basis of leisure and entertainment. In the context of Mauritius, the government may utilise a combination of these strategies to continue capitalising on Ilot Bernaches and others of Mauritius's neighbouring islets. The government of Mauritius needs to recognise these possibilities and introduce a business model to ensure that tourism activities at Ilot Bernaches are conducted within well-established and scientifically calculated parameters.

The island tourism literature possesses many examples of destination development models that have successfully demonstrated their viability through favourable environmental and social outcomes. The study by Cave and Brown (2012) mentions a few models, such as the modified versions of the Tourism Area Life Cycle on the Isle of Man and Tenerife (OrejaRodriguez et al., 2008); Butler's Realms of Experience (Ioannides, 2008), environmental audit (Diamantis& Westlake, 1997) on the Greek island of Mytilini; destination knowledge mapping in Korea (Pyo, 2005); the tourism consumption system (Woodside & Dubelaar, 2002); integrated technical economic modelling (Xu et al., 2003); and systems approaches that encompass multiple social, economic, cultural, and environmental dimensions (Carlsen, 1999; Northcote & Macbeth, 2006). These models are obviously underpinned by an awareness that tourism deals with finite—rather than infinitely renewable—markets and resources, leading to the need for sustainable approaches in the management of island destinations (Dodds, 2007).

At present, the Mauritian tourism industry has no destination development model or Destination Management Organisation (DMO). The main pieces of legislation providing for the protection and management of offshore islets in Mauritius do not include tourism legislation and are governed by the Forests and Reserves Act 1983, Wildlife and National Parks Act 1993, Pas Geometrique Act 1895, and the State Lands Act 1874. Consequently, due to a lack of control from tourism authorities, islets with tourism potential have been overexploited for short-term economic advantage, and this has encouraged all types of tourism promoters (skilled and unskilled, licensed and unlicensed) to capitalise on the opportunities. Without the introduction of a control mechanism, trip operators may continue to operate their tourism activities in the same uncontrolled and unsustainable manner.

Drawing upon the core-periphery model (Jordan, 2007), it is reasonable to suggest that Mauritius also suffers from a core-periphery relationship. One of the defining features of this model is the idea of domination of the periphery by the core, which is viewed as the place where administrative, cultural, and economic power resides and is seen as the decision-making nucleus separated from the periphery. In the present study, the power resides at the Ministry of Tourism of Mauritius and, as the main authority, it has the prerogative to delegate power to authorities operating under its aegis. As a result, tourism regulators such as the Tourism Authority, the Beach Authority, and the Mauritius Tourism Promotion Authority working under the Ministry of Tourism of Mauritius experience core-periphery relationships and, due to excessive power or less power delegated to them, they lack common vision and often duplicate the roles of their partners. The regulators therefore operate in a fragmented fashion, thus

reminding us of the 'fragmentation' aspect underlined in the work of Cooper et al. (1998). The differing objectives of the aforementioned regulatory bodies eventually result in conflicting objectives, domination of one authority over the other, and hence lead to the issue of destination mismanagement. This recalls the observation of Sheehan and Ritchie (2005), who argue that having a wide range of stakeholders entangled in core-periphery relationships might threaten the ability to achieve the destination's tourism goal. The issue of destination management was also highlighted in the work of Andriotis (2010) on the Mediterranean and Aegean islands. This study revealed that when tourism development decisions are made from the top down, when 'experts' make decisions, conflicts between stakeholder groups can arise. Decisions made in this manner are perceived by the local community as not reflecting community interests and opinions. While individuals actively become involved in and shape the institution that best supports their own interests, these behaviours can be quite opportunistic in nature. Individuals therefore usually follow this dominant logic because they have little choice based on entrenched power structures. Others seize the opportunity to shape and control aspects of their institutions in the hope that it will become the dominant logic and that they will be better positioned to receive beneficial outcomes.

Proposal: islet management authority

In the context of the present study, the core-periphery model is significant in that it indicates the implications of institutional reforms in internal core-periphery relationships, both within the main island and between the main island (the core) and an islet (the periphery) within the same sovereign territory. Based on the Commonwealth Secretariat recommendation to resolve core-periphery relationship issues by taking into account insights derived from modern theories of governance (Jordan, 2007), the establishment of an islet management authority under the purview of a government task force may be one feasible solution.

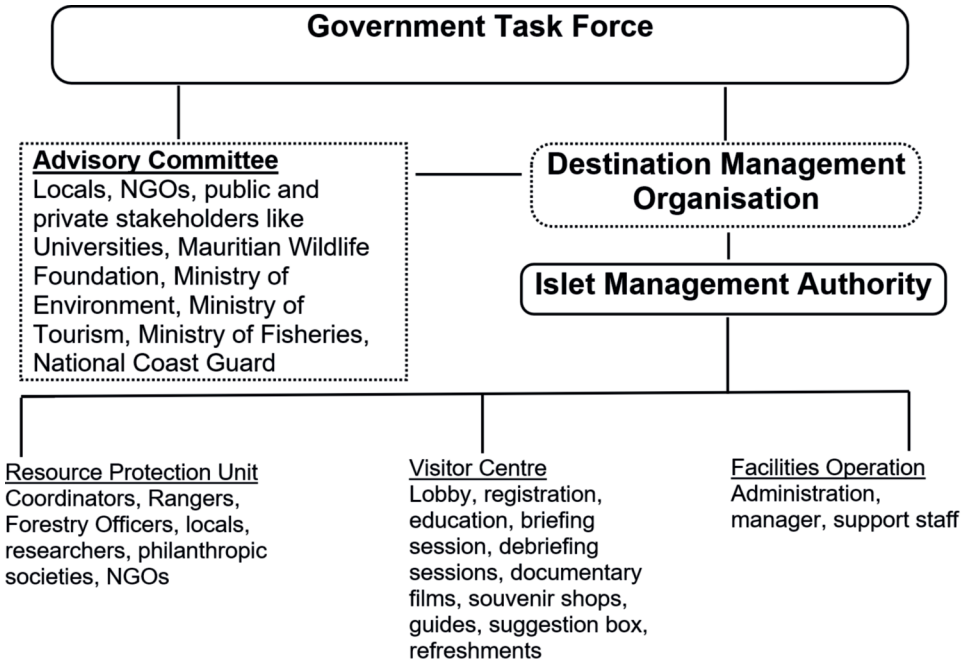

Figure 3: Proposed structure for an islet management authority. (© Gowreesunkar, Naqvi, & Séraphin, 2017.)

The institutionalisation of an islet management authority will give legitimacy to efforts at controlling tourism development and visitors' activities on Mauritius's islets. The authority should look into destination management, restoration programmes, sustainability issues, leasing of islets,

conservation, and preservation. Thus, the proposed islet management authority will comprise different units, namely a Resource Protection Unit, a Visitor Centre, and a Facilities Operation Unit. The Resource Protection Unit will work in collaboration with key stakeholders, conduct research, and feed information to the Visitor Centre. Local community empowerment and stakeholder perceptions are growing themes in destination development literature as evidenced by cases, for example, in Bali (Picard, 2003) and in Crete (Briassoulis, 2003). The Visitor Centre could employ and train locals on the history of the islet so that they could brief and educate visitors on the importance of protecting and preserving the islet's resources. The number of trips and number of visitors could also be controlled. For instance, Facilities Operation officers could use passes to control the number of visitors and their visiting time. The visiting time should have a time span to allow officers to go on a quick patrol every afternoon before leaving the islet.

The authority would act as a facilitator among key stakeholders and give direction on the number of visitors to be allowed as well as the types of tourism activities to be conducted. For instance, the authority could introduce specific seasons for fishing and snorkelling. This might give some breathing space to the marine life. Entry fees could be charged per visitor and funds could be utilised for cleaning and maintenance of the islet. Moreover, the Facilities Operation Unit might make a case for the development of a sewage system, the introduction of rubbish bins, and the availability of potable water as well as the development of kiosks and benches for visitors. The authority could also monitor and follow up on previously established committees that have proved ineffective. For instance, the National Report on the Convention on Biological Diversity (2010) mentions that a mangrove restoration programme was initiated and is ongoing. However, this needs to be reviewed and readapted according to contemporary issues that have emerged since the inception of the report. The government can also capitalise on its affiliation with international organisations like the Peregrine Fund (USA) and World Wide Fund for Nature (WWF) to establish more effective strategies to continue use of the islet as a tourism resource. The islet management authority might collaborate with the Mauritian Wildlife Foundation, an NGO mainly concerned with the conservation and preservation of endangered plant and animal species.

Recognising that any form of tourism development involves diverse stakeholders, the authority could establish an advisory committee and work plans with representatives of ministries, private partners, NGOs and Community-Based Organisations (CBOs) from adjacent villages. Moreover, to align diverse stakeholders' goals into a common vision, the authority could establish cooperative relationships with associations of boat owners, residents, fishermen, skippers, tour operators, and other service providers, especially in matters of resource utilisation and tourism development. Ritchie (1999) observes that a destination that has a tourism vision, shares the vision among all stakeholders, has management which develops an appropriate marketing strategy and a government which supports the tourism industry with an efficient tourism policy may be more competitive than one that has never asked what role tourism is to play in its economy. Given that the islet is government property, it is suggested that the government provide financial support to enable all the facilities needed on the islet. The introduction of entry fees to the islet could probably help in maintaining the facilities.

Conclusion and future research

Despite the difficulties of combining the different pertinent issues affecting Ilot Bernaches into a single stream of argument, the present study has helped establish that the islet has limiting factors that culminate in negative impacts and destination management implications. The overall findings have been explicit enough to determine that Ilot Bernaches has a major role in diversifying the Mauritian tourism offer. The study confirms that a lack of control has triggered gradual degradation of the islet's natural resources and that trip operators operate tourism activities according to their own terms and conditions. Therefore, central to this research is the belief that the sustainable future of the islet is dependent on the proper management of visitors and tourism activities. As a result, the present study makes a case for introducing an islet management authority for monitoring the islet and

addressing identified limiting factors. The application of the core-periphery model to the present study has been significant in establishing the implications of institutional reforms within the main island (the core) and between the main island (the core) and its islet (the periphery).

The islet management authority holds reasonable promise, but implementing it effectively will largely depend on whether destination management organisations or tourism bodies have the organisational capacity to make these partnerships work. The findings, though preliminary in many ways, enable tourism planners to better understand the implications of tourism development at Ilot Bernaches and probably at other islets with similar characteristics and tourism potential. Since tourism cannot be developed without depletions and implications, the outlined recommendations may inform tourism strategies for Ilot Bernaches. Future research might consider a replication of the study at Ilot Margenies, Ilot Cerfs, and Ilot Benitiers.

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References

Alessa, L., Bennett, S.M., & Kliskey, A.D. (2003). Effects of knowledge, personal attribution and perception of ecosystem health on depreciative behaviors in the intertidal zone of Pacific Rim National Park and Reserve. *Journal of Environmental Management*, 68(2), 207-218. https://doi.org/10.1016/S0301-4797(03)00068-9

Andriotis, K. (2004). Problems of island tourism development: the Greek insular regions in coastal mass tourism: diversification and sustainable development in Southern Europe. In B. Bramwell (Ed.) *Coastal Mass Tourism* (pp. 114-132). Clevedon: Channel View.

Andriotis, K. (2008). Integrated resort development: the case of Cavo Sidero, Crete. *Journal of Sustainable Tourism*, 16(4), 428-444. https://doi.org/10.1080/09669580802154207

Andriotis, K. (2010). Cruise visitors' experience in a Mediterranean port of call. *International Journal of Tourism Research*, 12(4), 390-404. https://doi.org/10.1002/jtr.770

Apostolopoulos, Y. & Gayle, D. (Eds.) (2012). *Island tourism and sustainable development: Caribbean, Pacific, and Mediterranean Experiences*. Westport: Praeger.

Ballantyne, R., Packer, J., & Falk, J. (2011). Visitors' learning for environmental sustainability: testing short- and long-term impacts of wildlife tourism experiences. *Tourism Management*, 32(6), 1243-1252. https://doi.org/10.1016/j.tourman.2010.11.003

Barros, C.P., & Alves, P. (2004). Productivity in tourism industry. *International Advances in Economic Research*, 10(3), 215-225. https://doi.org/10.1007/BF02296216

Botti, L., Peypoch, N., & Bernardin S.A. (2008). Time and tourism attraction. *Tourism Management*, 29, 594-596. https://doi.org/10.1016/j.tourman.2007.02.011

Briassoulis, H. (2003). Endowed by nature, privileged by geography, threatened by tourism? *Journal of Sustainable Tourism*, 11(2/3), 97-115. https://doi.org/10.1080/09669580308667198

Bruyere, B., Nash, P.E., & Mbogella, F. (2011). Predicting participation in environmental education by teachers in coastal regions of Tanzania. *The Journal of Environmental Education*, 42(3), 168-180. https://doi.org/10.1080/00958964.2010.525262

Carlsen, J. (1999). A systems approach to island tourism destination management. *System Approach and Behavioural Science System Research*, 16, 321-327. https://doi.org/10.1002/(SICI)1099-1743(199907/08)16:4<321::AID-SRES255>3.0.CO;2-5

Cave, J., & Brown, K. (2012). Island tourism: destinations: An editorial introduction to the special issue. *International Journal of Culture, Tourism and Hospitality Research*, 6(2), 95-113. https://doi.org/10.1108/17506181211233036

Conlin, M., & Baum, T. (1995). *Island tourism: management and practice*. Chichester: Wiley.

Cooper, C., Fletcher, J., Gilbert, D., & Wanhill, S. (1998). *Tourism Principles and Practice*. London: Pearson.

Crouch, G., & Ritchie, J.R. (1999). Tourism competitiveness and Societal Prosperity. *Journal of Business Research*, 44(3), 137-152. https://doi.org/10.1016/S0148-2963(97)00196-3

Diamantis, D., & Westlake, J. (1997). Environmental auditing: an approach towards monitoring the environmental impacts in tourism destinations, with reference to the case of Molyvos. *Progress in Tourism and Hospitality Research*, 3(1) 3-15. https://doi.org/10.1002/(SICI)1099-1603(199703)3:1<3::AID-PTH44>3.0.CO;2-J

Dodds, R. (2007). Sustainable tourism and policy implementation: Lessons from the case of Calvia, Spain. *Current Issues in Tourism*, 10(4), 296-322. https://doi.org/10.2167/cit278.0

Dwyer L. (2010). The relevance of yield measures to achieving sustainable tourism. Conference proceedings: Sustainable tourism—Issues, debates and challenges, Greece, 22-25 April.

Dygico, M., Songco, A. White, A., & Stuart, G. (2013). Achieving MPA effectiveness through application of responsive governance incentives in Tubbataha reef. *Marine Policy, 41,* 87-91. https://doi.org/10.1016/j.marpol.2012.12.031

Gowreesunkar, V.G.B. (2013*). The role of internal marketing in destination management: an empirical investigation of its application in the island of Mauritius*. Doctoral research at University of Technology, Mauritius under supervision of Professor Cooper (Oxford-Brookes University).

Gowreesunkar, G.B. & Rycha, I. (2014). A study on the impacts of dolphin watching as a tourism activity: Western Mauritius as a case study. Paper presented at the International Conference on Hospitality and Tourism Management, Paris, 21-22 May.

Gowreesunkar, V. & Sotiriades, M. (2015). Entertainment of leisure tourists in island destinations: Evidence from the Island of Mauritius. *African Journal of Hospitality, Tourism and Leisure*. 4(2223), 1-19.

Gowreesunkar, V., Van der Sterren, J., & Seraphin, H. (2015). Social Entrepreneurship as a Tool for Promoting Global Citizenship in Island Tourism Destination Management, *ARA Journal, 5*(1), 7-23.

Ioannides, D. (2008). Hypothesizing the shifting mosaic of attitudes through time: a dynamic framework for sustainable tourism development on a 'Mediterranean Isle'. In S. McCool & R. Moisey (Eds.) *Tourism, Recreation and Sustainability: Linking Culture and the Environment* (pp. 51-75), 2nd ed., Wallingford: CABI. https://doi.org/10.1079/9781845934705.0051

Jordan, L. (2007). Inter-organisational relationships in small twin island developing states in the Caribbean—the role of the internal core-periphery model: the case of trinidad and tobago. *Current Issues in Tourism*, 10(1), 1-32. https://doi.org/10.2167/cit267.0

King, R. (1993). The geographical fascination of islands. In D. Lockhart, D. Drakakis-Smith, & J. Schembri (Eds.), *The development process in small island states* (pp. 13-37). London: Routledge.

Kirillova, K., Fu, X., Lehto, X., & Cai, L. (2014). What makes a destination beautiful? Dimensions of tourist aesthetic judgment. *Tourism Management*, 42, 282-293. https://doi.org/10.1016/j.tourman.2013.12.006

MacLaurin, D., & Litvin, S. (2001). Tourism strategies in an island economy: how Singapore attracts the world. *Tourism (Zagreb)*, 49(4), 383-388.

Mathieson, A. & Wall, G. (1992). *Tourism: economic, physical and social impacts*. New York: Longman.

Mauremootoo, J.R., & Towner-Mauremootoo, C.V. (2002). Restoring paradise: alien species management for the restoration of terrestrial ecosystems in Mauritius and Rodrigues. Proceedings of a workshop on forging cooperation throughout southern Africa Lusaka, Zambia, 10-12 June.

Mauritius Environment Outlook (2011). Ministry of Environment and Sustainable Development. Government of Mauritius, 3-24.

Mauritius Fourth National Report on the Convention on Biological Diversity (2010). Ministry of Environment and Sustainable Development, Government of Mauritius, August, 2-78.

Mycoo, M. (2006). Sustainable tourism using regulations, market mechanisms and green certification: a case study of Barbados. *Journal of Sustainable Tourism*, 14(5), 489-511. https://doi.org/10.2167/jost600.0

Northcote, J., & Macbeth, J. (2006). Conceptualizing yield: sustainable tourism management. *Annals of Tourism Research*, 33(1) 199-220. https://doi.org/10.1016/j.annals.2005.10.012

Nunkoo, R., Smith, S.L.J., & Ramkissoon, H. (2013). Residents' attitudes to tourism: a longitudinal study of 140 articles from 1984 to 2010. *Journal of Sustainable Tourism*, 21(1), 5-25. https://doi.org/10.1080/09669582.2012.673621

Oreja Rodriguez, J., Parra-Lopez, E., & Yanes-Estevez, V. (2008). The sustainability of island destinations: tourism area life cycle and teleological perspectives: the case of Tenerife. *Tourism Management*, 29(1), 53-65. https://doi.org/10.1016/j.tourman.2007.04.007

Pestana, B.C., Botti L., Peypoch, N., Elisabeth, R., Bernardin, S.A., & Assaf, A.G (2011). Performance of French destinations: tourism attraction perspectives. *Tourism Management*, 32, 141-146. https://doi.org/10.1016/j.tourman.2010.01.015

Picard, M. (2003). Touristification and balinization in a time of Reformasi. *Indonesia and the Malay World*, 31(89), 108-18. https://doi.org/10.1080/13639810304435

Prayag, G., Ramphul, K., & Mootoo, M. (2010). Hotel development and tourism impacts in Mauritius: hoteliers' perspective on sustainable tourism. *Development Southern Africa Report*, 27(5), 697-712. https://doi.org/10.1080/0376835X.2010.522832

Pyo, S. (2005). Knowledge map for tourist destinations—needs and implications. *Tourism Management*, 26(4) 583-94. https://doi.org/10.1016/j.tourman.2004.03.001

Ramessur R.T., Parry S.J., & Jarvis K.E (1998). Characterization of some trace metals from the Export Processing Zone and a coastal tourist area in Mauritius. *Environment International*, 326(24), 773-781. https://doi.org/10.1016/S0160-4120(98)00063-4

Ramessur, R. (2002). Anthropogenic-driven changes with focus on the coastal zone of Mauritius. *Regional Environmental Change*, 3(1-3), 99-106. https://doi.org/10.1007/s10113-002-0045-0

Ritchie, J.R.B. (1999). Crafting a value driven vision for a national tourism treasure. *Tourism Management*, 20(2), 273-282. https://doi.org/10.1016/S0261-5177(98)00123-X

Rodriguez, J., Parra Lopez, E., & Yanes-Estevez, V. (2008). The sustainability of island destinations: tourism area life cycle and teleological perspectives: the case of Tenerife. *Tourism Management*, 29, 53-65. https://doi.org/10.1016/j.tourman.2007.04.007

Scherrer, P., Alonso, A., & Sheridan, L. (2009). Expanding the destination image: wine tourism in the Canary Islands. *International Journal of Tourism Research*, 11(5), 451-63. https://doi.org/10.1002/jtr.713

Seraphin, H., Gowreesunkar, G.B., & Butler, C. (2013). Entrepreneurship in the tourism sector: a comparative approach of Haiti, Mauritius and Coastal Kenya. *Journal of Hospitality and Tourism*, 11(2), 72-92.

Sharpley, R. (2001). Tourism in Cyprus: challenges and opportunities. *Tourism Geographies,* 3(1), 64-86. https://doi.org/10.1080/14616680010008711

Sheehan, L., & Ritchie, J.R.B. (2005). Destination stakeholders: exploring identity and salience. *Annals of Tourism Research*, 32(1), 711-34. https://doi.org/10.1016/j.annals.2004.10.013

Smith, M., Hills, J., Florens, V., Sotheran, I., & Daby, D. (2004). Rodrigues islets strategy framework. *Tourism Management*, 28, 409-422.

Soteriades, M., Avgeli, V., Holden, A., & Wickens, E. (2007). Promoting tourism destinations: a strategic marketing approach. *Tourism (Zagreb)*, 55(3) 335-45.

Spilanis, I., & Vayanni, H. (2003). Sustainable tourism: utopia or necessity? The role of new forms of tourism in the Aegean island. *Journal of Sustainable Tourism,* 2(9).

Stylidis, D., Terzidou, M., & Terzidis, K. (2008). Islands and destination image: the case of Ios. *Tourismos,* 3(1), 180-99.

Woodside, A., & Dubelaar, C. (2002). A general theory of tourism consumption systems: a conceptual framework and an empirical exploration. *Journal of Travel Research*, 41(2) 120-32. https://doi.org/10.1177/004728702237412

Xu, P., Brissaud, F., & Salgot, M. (2003). Facing water shortage in a Mediterranean tourist area: seawater desalination or water reuse? *Water Science and Technology: Water Supply*, 3(3), 63-70.

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Perceptions of entrepreneurial ecosystems in remote islands and core regions

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ABSTRACT: The existence of an effective entrepreneurial ecosystem is important for economic development and growth. This study considers how entrepreneurial ecosystems are perceived and operate in different locations focusing on remote islands compared to core/central regions. In particular, this study focuses on two remote island economies (the Canary Islands, in Spain, and Madeira, in Portugal), compared with Catalonia and Lisbon which are two core regions in Spain and Portugal. The evidence, based on a large-scale survey, shows that firms in remote islands perceive that they operate in a less favourable entrepreneurial ecosystem compared to firms in core regions although the findings show that there are significant variations across sectors of activity. Thus, the appropriate strategies for entrepreneurial action and for policy makers will vary depending on the characteristics of the ecosystem.

Keyword: entrepreneurial ecosystems, entrepreneurship, islands, new firm formation, regional policy, remote and core regions.

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Introduction

Entrepreneurship is a fundamental factor of economic and social development which helps explain regional disparities in economic growth (Audretsch & Thurik, 2004; Wennekers & Thurik, 1999). Regional economic and institutional conditions not only vary but will play a crucial role in the entrepreneurial process (Gartner, 1985). In particular, new firms are directly influenced by their locality, their survival being dependent on their adaptability and ability to maximize entrepreneurial efforts within a specific environmental setting (Aldrich & Martinez, 2001; Baldacchino et al., 2008; Romanelli, 1989). Recent research has cast this process in the context of local or regional entrepreneurial ecosystems; a concept first coined by Moore (1993) which, according to Isenberg (2010, p. 43) "consists of a set of individual elements—such as leadership, culture, capital markets, and open-minded customers—that combine in complex ways" to promote the entrepreneurial activity.

This study focuses a key dimension of entrepreneurship: perceptions of the entrepreneurial ecosystem and factors and problems that encourage and constrain entrepreneurial activity (here defined as new firm formation). To highlight the importance of location, this study focuses on remote or peripheral locations compared to core or central regions. In particular, this study focuses on two remote island economies (the Canary Islands in Spain and Madeira in Portugal) which can be characterized as sub-national island jurisdictions according to Baldacchino (2006); compared with Catalonia and Lisbon which are two core regions in Spain and Portugal (Martin,

2003) respectively. Although remote islands may be expected to have a unique and uncertain ecosystem for entrepreneurial activity, there is limited analysis of entrepreneurship in this type of region (Baldacchino & Fairbairn, 2006; Burnett & Danson, 2017; Danson & Burnett, 2014; Garcia-Rodriguez et al., 2016; Lovelock et al., 2010; Yusuf, 1995). For Read (2008), one of the reasons for this gap in the literature is the low absolute volume of capital flows. This study helps to address the gap by investigating the following research questions: what do entrepreneurs perceive to be the differences in the entrepreneurial ecosystem between remote islands and core regions; and what differentiates the new firm formation process in remote islands compared with core regions? In doing so, we contribute to the study of entrepreneurship by analysing the uniqueness of the phenomenon in the specific context of island economies.

This paper is structured as follows. The next section analyses the concept of the entrepreneurial ecosystem and discusses the differences between remote and core regions to help develop the research hypotheses. The third section outlines the research methodology and the data collection process. The fourth section presents the main results of the study. The final section concludes and includes the implications for policy.

Spatial differences in entrepreneurship ecosystems: theory and hypotheses

Economic and entrepreneurial activity on remote islands

According to Sufrauj (2011, p. 20), "Size and geography contribute largely to shaping the economic structure of nations […] smallness and remoteness are features that are likely to deter the economies of islands." Briguglio (1995) identified two important vulnerabilities of remote islands: small size; and insularity and remoteness. These vulnerabilities impact economic activity in remote islands due to:

> Limited natural resource endowments leading to a high import content; limitations on import-substitution possibilities due to the small size of the domestic market; dependence on a narrow range of products and services; limited ability to influence domestic prices of exports and imports; limited ability to exploit economies of scale, mostly due to indivisibilities and limited scope for specialization; (and) limitations on domestic competition (Briguglio, 1995, pp. 1616-1617).

Therefore, the specific characteristics of the remote islands will result in a "rent-seeking economic structure, limited industrialization, a relatively large bloated public sector, and a very small private sector" (Baldacchino, 1999, p. 80) and have adverse effects on their economic growth (Read, 2004). Thus, the nature of entrepreneurial activity will be constrained by resources and conditions and, consequently, will generally be oriented to imports, trade, and consumption (Baldacchino, 2005).

Entrepreneurial ecosystems

The entrepreneurship ecosystem is an arrangement of fundamental activities and resources which determine regional entrepreneurial dynamics (Ács et al., 2015). It comprises "a set of interconnected entrepreneurial actors and organizations, institutions, and entrepreneurial processes which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment" (Mason & Brown, 2014, p. 5). Several empirical studies have identified the factors, characteristics, and conditions perceived as fundamental to the development of entrepreneurial activity in a region (e.g. Bull & Winter 1991; Fritsch & Schindele, 2011). These studies identify six important domains of the entrepreneurial ecosystem: social and demographic, economic, technological, financial, infrastructural, and policy.

Entrepreneurial ecosystems in remote and core regions: some hypotheses

Remote and core regions are at two ends of the location spectrum: the location of the former potentially leads to low economic development and growth; whereas the latter may have all the necessary resources to flourish—economically, socially, and culturally. Kaufmann and Malul (2015, p. 1345) define a core region "as a region with strong, concentrated economic activity that exhibits economies of scale and specialization." Whereas a remote region, which can be rural and/or peripheral, is at the "edge of a communication system, where they are away from the core or controlling centre of the economy" (Goodall, 1987, p. 350). Anderson (2000) emphasizes that peripheral regions are best understood as a subordinate to a core region, and are usually characterized as: separated in space from the core regions; with limited markets, income, growth, scale of production, and skilled labour, which condemns peripheral firms to remaining small; and different in cultural terms when compared to core regions. Additionally, the peripherality may also create the added barrier of limited access to information (Beer, 2004).

The notion of remoteness is a relative concept, and in the specific case of small islands this concept is magnified due to: the limited extent of labour market, a small population that might be further reduced by the emigration of skilled labour, and a small domestic market which fosters the formation of local oligopolies and monopolies (Sufrauj, 2011). These regions will also suffer from inadequate access to technology and investment capital (Baldacchino, 1999), from limited economic interactions (Sufrauj, 2011), and from limited accessibility, being in disadvantage "compared with the mainland for transport choice, travel time and costs" (Spilanis et al., 2013, p. 2016). However, the discussion of peripherality and remoteness in the small island context is not straightforward. As Grydehøj et al. (2015, p. 4) emphasize, the field of island studies needs to understand:

> islands on their own terms precisely by combatting the futile provincialisations of an island rhetoric that tacitly accepts the dominance of the centre in its championing of the periphery. Only by permitting ourselves to regard islands as centres within complex networks of centrality and peripherality—rather than simply as peripheries or as mystical centres unto themselves—can we transcend the savage inequalities of how we speak about and act upon both islands and mainlands. Only then can we place islands in context and place context on islands.

Moreover, not all authors agree with the "vulnerability paradigm" surrounding small islands (e.g. Baldacchino, 2015). Baldacchino and Bertram (2009) present different development alternatives, where the specificities of island economies are not insurmountable obstacles but are characteristics that can lead to dynamic flexibility. However, a strong stream of literature argues that remote islands have deficiencies in their entrepreneurial ecosystems compared to core regions, making the former less attractive for economic activities (Spilanis et al., 2013) leading to the following hypotheses.

- Hypothesis 1: firms in core regions will perceive that they operate in a more favourable entrepreneurial ecosystem compared to firms that operate in remote islands (where 'entrepreneurial ecosystem' domains are social and demographic, economic, technological, financial, infrastructural, and policy).

Entrepreneurial opportunity is defined "as a situation in which a person can create a new means-ends framework for recombining resources that the entrepreneur believes will yield a profit" (Shane, 2003, p.18); its discovery is perceived as essential for entrepreneurship activity (Shane & Venkataraman, 2000). In this process, the access to information is fundamental (Shane, 2000) and this is influenced by an individual's life experience, social networks, and social processes (Mason & Harvey, 2013). Additionally, context will also be an important factor, as stressed by Welter (2011, p. 165), "context simultaneously provides individuals with entrepreneurial opportunities and sets boundaries for their actions; in other words, individuals may experience it

as asset and liability." Given the unique characteristics of island economies discussed above, especially a limited access to information (Beer, 2004); limited resources and capacities to participate in relevant network activities; low density of research, development, and innovation; and technology and skills gap (European Union, 2017), it is hypothesised that:

- Hypothesis 2: firms in core regions will perceive it to be easier to identify a business opportunity in their sector of activity compared to firms that operate in remote islands.

Importance of government policy for remote islands

Isenberg (2011, p. 13) argues that the main function of government is to cultivate a virtuous cycle of entrepreneurship, and that the shortest path is to "directly create, enhance, cultivate, evolve—a geographically concentrated ecosystem that is conducive to entrepreneurship and its success." To achieve effective results, policy measures need to be customized and tailored to the local area (Cheng & Li, 2011; Dubini, 1989; Frederick & Monsen, 2009; Fritsch & Storey, 2014). This differentiation is required because there are considerable differences in regional entrepreneurship ecosystems, and policy needs to be adapted to island specificities (Spilanis et al., 2013). In remote islands, governmental policy can influence the development of entrepreneurial activity as it can address gaps in resources and competence needs of entrepreneurial firms (Amorós et al., 2013; Levie & Autio, 2008). Therefore, island entrepreneurs consider government support a critical factor for their success (Yusuf, 1995). It is thus hypothesised that:

- Hypothesis 3: in terms of new firm formation, the support from governmental policy will be more important for firms in remote islands compared with firms in core regions.

New firm formation process is the action undertaken by entrepreneurs to legally create an entity to explore a business opportunity. Support from government to assist new entrepreneurs includes low legal requirements to establish a business and attractive fiscal incentives.

Geographic and economic constraints of remote islands

Regions that have good access to resources, a large market size, and an encouraging entrepreneurial culture may be expected to have more dynamic entrepreneurial activity compared to regions that have geographic and economic constraints, defined as: 1) high transportation costs, 2) small regional market, 3) low economic diversity, 4) high geographic distance from customers, and 5) high geographic distance from suppliers. Thus, it can be hypothesized that:

- Hypothesis 4: when establishing new firms, entrepreneurs in remote islands will place more emphasis on problems linked to geographic and economic constraints compared to entrepreneurs establishing firms in core regions.

Data and methods

This study considers the entrepreneurial ecosystems in four regions in two countries: Spain (Canary Islands and Catalonia) and Portugal (Madeira and Lisbon). Additionally, three different sectors of activity were analysed: medical and dental instruments and supplies (manufacturing); travel agencies, tour operator reservation services and related activities and amusement and recreation activities (tourism); legal accounting, book-keeping, and auditing activities and tax consultancy (business services). The cross-sectional survey questionnaire used in this research was a specific tool designed to collect data that was not available elsewhere. The data was collected in 2010 during a world economic crisis when governments in Spain and Portugal were implementing severe measures to control public deficits. This macroeconomic and fiscal context may have influenced the respondents' perception of the entrepreneurial ecosystem, especially the economic and financial domains.

The questionnaire methodology followed established procedures to ensure empirical validity and reliability. It should be stressed, however, that the survey was concerned with the *perceptions* of the respondents and not independently observable evidence of entrepreneurial behaviour. This subjective approach provides a unique perspective. First, the respondents in the survey were experts in their sector of activity to provide valid and useful information for our research. Second, perceptions are primary drivers of entrepreneurial activity—what individuals perceive are important determinants of subsequent behaviour.

Data collection and reliability

Using the online Yellow Pages, a database of firms in Spain and Portugal was created at the beginning of 2010. This method was deployed as there was no other database with the required information, and this online platform allowed search by location and sector of activity. The questionnaire was created to be used online and thus required respondents to have an e-mail account. All firms that did not had an e-mail account, on the yellow pages or on their institutional website, were excluded from the database. The final database included the information (name, activity, postal address, telephone and fax number, e-mail address, and (normally) URL) of 2,694 firms from Spain and 1,006 firms from Portugal. The definition of 'firm' adopted in conducting this research was a legal entity which has at least one employee, thus excluding self-employed people from the study. The 3,700 firms were contacted by e-mail, requesting their participation in the online questionnaire; followed, if required, by a telephone reminder. In the case of the manufacturing sector in Madeira, which only had a total of 17 firms, a paper version of the questionnaire was delivered to each firm's premises.

A total of 595 completed surveys were collected from all four regions. The total response rate was of 16%: varying from 7.7% in Catalonia to 44.3% in Madeira. It is important to note that the participation of firms from the manufacturing sector was limited by their low access to information technology and that the higher response rate in Madeira was due to the help provided by the local chamber of commerce that encouraged firms to participate in the study. Nevertheless, despite the random selection, there were differences between regions regarding the response rate, which made it necessary to test for potential non-response bias. The Armstrong and Overton (1977) approach was used to estimate the non-response bias by comparing early respondents with late respondents (where late respondents were used as proxies for non-respondents). The Mann-Whitney U test between these two groups of responses in all four regions did not reveal statistical significant differences. Additionally, a comparison between the sample structure with the overall population of firms shows that the respondent firms were representative of their localities.

The survey instrument

The questionnaire consisted of closed questions, divided into four sections (questionnaire available from the authors on request). In the first section, respondents were asked to provide demographic and financial information about their firm and social and demographic information about themselves. In the remaining sections, respondents were asked to use a five-point Likert scale to assess: in section two, the entrepreneurial ecosystem in their region; in section three, the most important factors in new firm formation in their sector of activity; and in section four, the major problems when creating a new firm in their sector of activity. The variables used in these sections were drawn from an in-depth literature review of the remote island limitations, entrepreneurial ecosystems, and of the factors, characteristics, and conditions that are fundamental to the new firm formation (e.g. Armington & Acs, 2002; Choi & Phan, 2006; Cromie, 1987; Davidsson, 1991; Dubini, 1989; Greve & Salaff, 2003; Kirchhoff et al., 2007; Klappera et al., 2006; Reynolds et al., 1994; Sutaria & Hicks, 2004; Tamásy, 2006). Although the questionnaire was created to provide information on the spatial variations in entrepreneurial ecosystems, it was built on the foundations of other successful surveys of business performance (Cosh & Hughes, 2007; Cosh et al., 2008; Goodbody, 2002; OECD, 2004; Quince & Whittaker, 2002):

Table 1: Firms' sample composition (N= 595).

Firm		Total		Remote islands				Core regions			
		N	%	Canary		Madeira		Catalonia		Lisbon	
Age	< 6 years	147	24.7	31	22.6	29	22.7	28	20.4	59	30.6
	6 to 10 years	147	24.7	30	21.9	40	31.3	28	20.4	49	25.4
	11 to 20 years	177	29.7	52	38.0	39	30.5	34	24.8	52	26.9
	> 20 years	124	20.8	24	17.5	20	15.6	47	34.3	33	17.1
Size	Micro	494	83.0	118	86.1	101	78.9	112	81.8	163	84.5
	Small	90	15.1	18	13.1	27	21.1	21	15.3	24	12.4
	Medium/large	11	1.8	1	0.7	0	0.0	4	2.9	6	3.1
Turnover	< €150,001	245	41.2	59	43.1	62	48.4	38	27.7	86	44.6
	€150,001 to €500,000	157	26.4	42	30.7	22	17.2	46	33.6	47	24.4
	€500,001 to €2,500,000	85	14.3	16	11.7	15	11.7	29	21.2	25	13.0
	€2,500,001 to €5,000,000	21	3.5	2	1.5	6	4.7	8	5.8	5	2.6
	€5,000,001 to €10,000,000	17	2.9	2	1.5	9	7.0	2	1.5	4	2.1
	> €10,000,000	11	1.8	0	0.0	3	2.3	3	2.2	5	2.6
	Do not know/ Not applicable	59	9.9	16	11.7	11	8.6	11	8.0	21	10.9
Annual growth	< 0%	155	26.1	47	34.3	43	33.6	34	24.8	31	16.1
	0% a 5%	183	30.8	37	27.0	42	32.8	47	34.3	57	29.5
	5.01% to 10%	90	15.1	20	14.6	11	8.6	27	19.7	32	16.6
	10.01% to 25%	53	8.9	4	2.9	14	10.9	11	8.0	24	12.4
	> 25%	43	7.2	8	5.8	7	5.5	6	4.4	22	11.4
	Do not know/ Not applicable	71	11.9	21	15.3	11	8.6	12	8.8	27	14.0
Sector	Manufacture	94	15.8	15	10.9	12	9.4	33	24.1	34	17.6
	Tourism	226	38.0	53	38.7	46	35.9	48	35.0	79	40.9
	Bus. Services	275	46.2	69	50.4	70	54.7	56	40.9	80	41.5

The characteristics of the sample

Table 1 shows the main characteristics of the survey sample. Approximately 80% of firms had been established for less than 20 years, and have less than 10 employees, demonstrating that the entrepreneurial ecosystem in these regions is mainly composed of micro firms with a small turnover. Table 2 shows that almost half of the respondents are the firms' founders—the entrepreneurs; and that one third of the respondents are female. The majority of the respondents are between 30 and 59 years old and have a College/University degree. An interesting finding is that Madeira has the highest percentage of younger entrepreneurs; this may suggest there is a lack of alternative job opportunities which may push young individuals towards entrepreneurship.

Table 2: Respondents' sample composition (N= 595).

Respondent		Total		Remote islands				Core regions			
		N	%	Canary		Madeira		Catalonia		Lisbon	
Positio	Founder	282	47.4	65	47.4	51	39.8	71	51.8	95	49.2
	Partner	121	20.3	23	16.8	32	25.0	24	17.5	42	21.8
	Director	192	32.3	49	35.8	45	35.2	42	30.7	56	29.0
Sex	Female	194	32.6	42	30.7	43	33.6	45	32.8	64	33.2
	Male	401	67.4	95	69.3	85	66.4	92	67.2	129	66.8
Age group	20 to 29 years	31	5.2	2	1.5	8	6.3	4	2.9	17	8.8
	30 to 39 years	190	31.9	38	27.7	55	43.0	34	24.8	63	32.6
	40 to 49 years	208	35.0	54	39.4	38	29.7	54	39.4	62	32.1
	50 to 59 years	123	20.7	35	25.5	17	13.3	30	21.9	41	21.2
	More than 59 years	43	7.2	8	5.8	10	7.8	15	10.9	10	5.2
Level education	First School	4	0.7	3	2.2	0	0.0	1	0.7	0	0.0
	Middle School	15	2.5	4	2.9	0	0.0	9	6.6	2	1.0
	High School	149	25.0	29	21.2	44	34.4	26	19.0	50	25.9
	College/university	320	53.8	75	54.7	65	50.8	72	52.6	108	56.0
	Postgraduate	107	18.0	26	19.0	19	14.8	29	21.2	33	17.1

Results and discussion

Hypotheses 1 and 2: Canary Islands versus Catalonia

To test for statistical differences between the characteristics of the ecosystems in remote islands and core regions we use the non-parametric Mann-Whitney U test. Table 3 shows that there are statistically significant differences in 12 of the 15 factors that characterize the entrepreneurial ecosystem, when comparing the assessment made by firms in Canary Islands with those in Catalonia. The majority of the factors have higher mean scores in Catalonia, the exception being fiscal incentives, which may reflect a higher public policy support in the remote region. Overall, the results support Hypothesis 1.

Table 3 also shows that there are significant differences between two sectors in the ease to identify a business opportunity: manufacturing achieved a higher mean score in Catalonia; whereas tourism obtained the higher mean score in the Canary Islands. These results, therefore, only partially support Hypothesis 2.

Hypotheses 1 and 2: Madeira versus Lisbon

Table 4 shows statistically significant differences in a total of 10 factors in the assessment of the entrepreneurial ecosystem made by firms in Madeira compared with those in Lisbon. The factors obtained higher mean scores in Lisbon, with two exceptions: social attitudes encouraging new entrepreneurs and fiscal incentives. Overall, the results support Hypothesis 1. When comparing ease to identify a business opportunity assessment, in all three sectors, there are no statistically significant differences. Therefore, regarding the comparison between Madeira and Lisbon, the results do not support Hypothesis 2.

Table 3: Mann-Whitney U test results to the assessment of the entrepreneurial ecosystem in Canary Islands and Catalonia.

Domains	Region	Mean	SD	Mean rank	Mann-Whitney	Z
Social and demographic						
Social attitude encourages new entrepreneurs	Canary	2.5	1	125.8	7,781.5	-2.54*
	Catalonia	2.8	1	149.2		
Entrepreneurs have good social networks	Canary	2.4	1	121.16	7,146	-3.56**
	Catalonia	2.9	1	153.84		
Good level of schooling and skills	Canary	2.5	1	103.43	4,716.5	-7.43**
	Catalonia	3.4	0.9	171.57		
Adequate business background experience by entrepreneur	Canary	2.7	0.9	116.32	6,482.5	-4.65**
	Catalonia	3.2	0.9	158.68		
Good level of demand	Canary	2.4	0.9	124.81	7,645.5	-2.79*
	Catalonia	2.7	0.9	150.19		
Economic						
Good level of growth in income availability	Canary	1.9	0.8	119.08	6,861	-4.16**
	Catalonia	2.3	0.9	155.92		
Supportive industrial structure	Canary	2.2	0.9	118.09	6,725.5	-4.31**
	Catalonia	2.7	0.9	156.91		
Technological						
Efficient knowledge exchange	Canary	2.7	0.9	117.65	6,665.5	-4.36**
	Catalonia	3.2	1	157.35		
Public sector invests in R&D	Canary	2.5	0.9	130.06	8,365	-1.64
	Catalonia	2.6	0.9	144.94		
Private sector invests in R&D	Canary	2.6	0.8	110	5,617	-6.08**
	Catalonia	3.2	0.8	165		
Financial						
Good availability of capital	Canary	2.2	0.9	124.72	7,634	-2.81*
	Catalonia	2.5	1.1	150.28		
Fiscal incentives	Canary	3.1	1.2	169.58	4,989	-6.90**
	Catalonia	2.1	1	105.42		
Infrastructural						
Good communication and transport	Canary	2.9	1.1	121.47	7,189	-3.54**
	Catalonia	3.3	1.1	153.53		
Good business supportive services	Canary	2.5	1	132.6	8,713.5	-1.07
	Catalonia	2.6	1	142.4		
Policy						
Supportive governmental policies	Canary	2.2	0.9	133.15	8,788.5	-0.97
	Catalonia	2.4	0.9	141.85		
Easy to identify a business opportunity						
Manufacturing	Canary	2.1	1.2	17.43	1,41.5	-2.48*
	Catalonia	2.8	0.8	27.71		
Tourism	Canary	3.0	1	57.1	948.5	-2.30*
	Catalonia	2.6	0.9	44.26		
Business services	Canary	2.4	0.9	64.76	1,808.5	-0.65
	Catalonia	2.7	0.8	60.79		

* $p < 0.05$, ** $p < 0.001$ (two tailed)

Table 4: Mann-Whitney U test results to the assessment of the entrepreneurial ecosystem in Madeira and Lisbon.

Domains	Region	Mean	SD	Mean Rank	Mann-Whitney	Z
Social and demographic						
Social attitude encourages new entrepreneurs	Madeira	3.1	1	187.57	8,951.5	-4.37**
	Lisbon	2.6	1	143.38		
Entrepreneurs have good social networks	Madeira	3	1	166.21	11,685.5	-0.86
	Lisbon	2.9	1	157.55		
Good level of schooling and skills	Madeira	2.9	1	129.72	8,348.5	-5.21**
	Lisbon	3.4	0.9	181.74		
Adequate business background experience by entrepreneur	Madeira	2.9	0.9	146.46	10,491.5	-2.42*
	Lisbon	3.1	0.9	170.64		
Good level of demand	Madeira	3.3	1	154.15	11,475.5	-1.17
	Lisbon	3.4	0.9	165.54		
Economic						
Good level of growth in income availability	Madeira	2.2	0.8	144.49	10,238.5	-2.8*
	Lisbon	2.5	0.9	171.95		
Supportive industrial structure	Madeira	2	0.9	135.38	9,073	-4.23**
	Lisbon	2.5	0.9	177.99		
Technological						
Efficient knowledge exchange	Madeira	2.8	1	151.34	11,116	-1.59
	Lisbon	3	1	167.4		
Public sector invests in R&D	Madeira	2.6	1	154.01	11,457	-1.16
	Lisbon	2.7	0.9	165.64		
Private sector invests in R&D	Madeira	2.5	1	133.29	8,805	-4.56**
	Lisbon	3	0.9	179.38		
Financial						
Good availability of capital	Madeira	2.4	0.9	139.82	9,641	-3.48**
	Lisbon	2.7	1	175.05		
Fiscal incentives	Madeira	2.6	1.2	189.88	8,656	-4.77**
	Lisbon	2	0.9	141.85		
Infrastructural						
Good communication and transport	Madeira	3.8	1	150.11	10,958.5	-2.02*
	Lisbon	4	0.8	168.22		
Good business supportive services	Madeira	3.1	1	158	11,968	-0.5
	Lisbon	3.2	1	162.99		
Policy						
Supportive governmental policies	Madeira	3	1.1	180.43	9,865	-3.17*
	Lisbon	2.6	1	148.11		
Easy to identify a business opportunity						
Manufacturing	Madeira	2.5	1.2	22.25	189	-0.4
	Lisbon	2.6	0.9	23.94		
Tourism	Madeira	2.6	1	59.48	1,655	-0.87
	Lisbon	2.8	1	65.05		
Business services	Madeira	2.8	0.9	76.47	2,732	-0.27
	Lisbon	2.8	0.9	74.65		

* $p < 0.05$, ** $p < 0.001$ (two tailed)

Hypothesis 3: Important factors in new firm formation—Remote Islands versus Core Regions

The Kruskall-Wallis H test was used to check for statistically significant differences between remote islands and core region in the assessment of the most important factors and major problems in new firm formation, by region and sector of activity. To interpret Tables 5 and 6 there are three important points to note. First, an asterisk in the first line of a variable indicates statistical significant differences between all sectors within the same region in that specific variable. Second, an asterisk in the mean score line of a variable indicates statistical significant differences between all regions. Third, an asterisk in last column (average score) of a variable indicate statistical significant differences between all regions within the same sector.

In Table 5 the factors with the highest scores are: identified a business opportunity; background experience and knowledge of the business; have the necessary capital; and have a good business idea. The evidence shows that the assessment of the most important factors for new firm formation are similar across the different regions.

Deepening the analysis, it is possible to identify significant statistical differences between all regions in five of the 11 factors, including: identifying a business opportunity is more important for new firms in Catalonia and Lisbon compared to the remote islands, and lack of other jobs are relatively more important in the Canary Islands, which may reflect the high structural unemployment in the region. Another interesting result is that the majority of mean scores of the answers diverge from the middle of the scale suggesting that entrepreneurs consider that a wide range of factors are important for new firm formation—reflecting both individual characteristics and those of the broader ecosystem.

Regarding the results by sector, firms in the manufacturing sector consider that formal educational levels are an important factor for new firm formation. Looking at the three factors used to assess governmental policy; only one had statistical significantly differences, the attractive fiscal incentives, which obtained a higher score in the Canary Islands. Therefore, the results only partially support Hypothesis 3.

Hypothesis 4: The major problems in new firm formation—remote islands versus core regions

The assessment of the major problems in new firm formation are presented in Table 6. In general, including by sector, firms in all regions highlight the following problems: finding sources of finance and the cost of finance. However, these results may reflect the context of economic crisis faced by Spain and Portugal during the data collection period when access to financial capital was squeezed. There are statistically significant differences between the four regions in eight of the 17 problems. As expected, firms in Catalonia and Lisbon consider that high geographic distance from customers and high geographic distance from suppliers are a minor problem. However, the problems of management expertise, writing a formal business plan, and coping with regulation obtained higher mean scores in core regions.

Table 5: Most important factors in new firm formation (mean scores).

Factors	Activity	Remote islands		Core regions		Average score
		Canary	Madeira	Catalonia	Lisbon	
Help from family and friends	Manufacturing	3.3	3.5	3.5	3.6	3.5
	Tourism	3.3	3.3	3.4	3.2	3.3
	Business services	3.3	3.2	3.4	3.3	3.3
	Mean score	3.3	3.3	3.4	3.3	
Identified a Business opportunity	Manufacturing	4.1	4.0	4.2	4.1*	4.1
	Tourism	3.9	4.1	4.2	4.3	4.1**
	Business services	4.0	4.0	4.1	4.1	4.1
	Mean score	4.0**	4.0	4.2	4.2	
Formal Educational level	Manufacturing	4.4**	4.3	4.1	3.9**	4.2*
	Tourism	3.7	3.7	3.7	3.7	3.7
	Business services	3.8	3.9	4.0	4.1	4.0
	Mean score	3.8	3.9	3.9	3.9	
Background experience	Manufacturing	4.5	4.3	4.5	4.4	4.4
	Tourism	4.2	4.5	4.2	4.5	4.4
	Business services	4.1	4.3	4.2	4.5	4.3*
	Mean score	4.2*	4.4	4.3	4.5	
Support from governmental programmes	Manufacturing	3.5	3.7	3.5	3.6	3.6
	Tourism	3.5	3.6	3.4	3.2	3.4
	Business services	3.2	3.5	3.1	3.2	3.3*
	Mean score	3.3	3.6	3.3	3.3	
Low legal requirements	Manufacturing	3.6	3.6	3.6	3.5	3.6
	Tourism	3.7	3.5	3.8	3.5	3.6
	Business services	3.5	3.6	3.3	3.5	3.5
	Mean score	3.6	3.5	3.5	3.5	
Have the Necessary capital	Manufacturing	4.6	4.5	4.4	4.5*	4.5
	Tourism	4.2	4.3	4.4	4.3	4.3
	Business services	4.2	4.2	4.2	4.1	4.2
	Mean score	4.2	4.2	4.3	4.3	
Attractive Fiscal incentives	Manufacturing	3.7	3.6	3.7*	3.7	3.7
	Tourism	3.9	3.7	3.8	3.4	3.7
	Business services	3.9	3.6	3.3	3.2	3.5**
	Mean score	3.9**	3.6	3.6	3.4	
Have a good business idea	Manufacturing	4.3	4.2*	4.4	4.3	4.3
	Tourism	4.2	4.6	4.4	4.5	4.4**
	Business services	4.3	4.3	4.3	4.3	4.3
	Mean score	4.3	4.4	4.4	4.4	
Entrepreneurship runs in family	Manufacturing	2.9	2.7	3.4	3.4	3.1
	Tourism	3.3	3.0	3.3	3.1	3.2
	Business services	3.6	3.2	3.4	3.4	3.4
	Mean score	3.4**	3.1	3.4	3.3	
Lack of other jobs/ opportunities	Manufacturing	3.5	3.1**	3.2	3.2	3.3
	Tourism	3.6	2.9	3.4	3.3	3.3**
	Business services	3.8	3.5	3.3	3.1	3.4**
	Mean score	3.7**	3.2	3.3	3.2	

* $p < 0.05$, ** $p < 0.001$

Table 6: Major problems in new firm formation (mean scores)

Problems	Activity	Remote islands		Core regions		Average score
		Canary	Madeira	Catalonia	Lisbon	
Management expertise	Manufacturing	2.2**	2.7	3.4**	2.7	2.8*
	Tourism	2.3	2.5	2.5	2.9	2.6
	Business services	2.9	2.8	3.1	2.9	2.9
	Mean score	2.6	2.7	2.9	2.9	
Writing a formal business plan	Manufacturing	2.3	2.4	3.2*	2.7	2.7
	Tourism	2.7	2.8	2.4	2.9	2.7
	Business services	2.8	2.7	2.9	3.1	2.9
	Mean score	2.7	2.7	2.8	3.0	
Finding premises	Manufacturing	3.2	3.3**	3.0	3.0	3.1
	Tourism	2.6	3.4	2.6	2.8	2.9*
	Business services	2.6	2.6	2.4	2.6	2.6
	Mean score	2.7	2.9	2.6	2.8	
Cost of premises	Manufacturing	3.9	3.3	3.8	3.7	3.7
	Tourism	3.4	3.7	3.7	3.4	3.6
	Business services	3.5	3.6	3.4	3.6	3.5
	Mean score	3.5	3.6	3.6	3.5	
Finding source of finance	Manufacturing	4.3	3.8	4.3	4.1	4.1
	Tourism	4.0	4.2	4.3	3.8	4.1*
	Business services	4.2	3.9	4.1	3.9	4.0
	Mean score	4.1*	4.0	4.2	3.9	
Cost of finance	Manufacturing	4.4*	4.1	3.9	3.9	4.1
	Tourism	3.7	4.1	4.2	3.8	4.0*
	Business services	3.9	3.8	3.7	3.9	3.8
	Mean score	3.9	3.9	3.9	3.9	
Finding customers	Manufacturing	3.5	3.5	3.2	3.3*	3.4
	Tourism	3.1	3.6	3.5	3.2	3.4
	Business services	3.5	3.9	3.6	3.8	3.7
	Mean score	3.3*	3.7	3.5	3.4	
Availability of skilled workers	Manufacturing	3.9	4.3**	3.7	3.8*	3.9
	Tourism	3.3	2.9	3.6	3.1	3.2
	Business services	3.7	3.3	3.5	3.3	3.5
	Mean score	3.5	3.2	3.6	3.3	
Employee costs	Manufacturing	3.9	3.2	3.6	3.4	3.5
	Tourism	3.4	3.5	3.7	3.4	3.5
	Business services	3.7	3.5	3.4	3.5	3.5
	Mean score	3.6	3.5	3.6	3.4	
Coping with regulation	Manufacturing	3.1	2.9	3.8*	3.6**	3.4
	Tourism	3.4	3.4	3.6	3.5	3.5
	Business services	3.1	3.1	3.1	2.9	3.1
	Mean score	3.2	3.2	3.4	3.3	
Competing with other firms	Manufacturing	3.9**	2.5*	3.2	2.9	3.1*
	Tourism	2.8	3.8	3.4	3.1	3.3**
	Business services	3.1	3.5	3.1	3.4	3.3
	Mean score	3.1*	3.5	3.2	3.2	

Lack of advice/ support	Manufacturing	3.2	2.8	3.3**	3.4*	3.2
	Tourism	3.2	3.0	3.2	3.0	3.1
	Business services	2.9	2.7	2.6	2.7	2.7
	Mean score	3.0	2.8	3.0	2.9	
High transportation costs	Manufacturing	3.9**	3.4**	3.1**	3.1**	3.4
	Tourism	2.7	3.7	2.7	2.7	3.0**
	Business services	2.9	2.7	2.1	2.3	2.5*
	Mean score	2.9**	3.1	2.5	2.6	
Small regional market	Manufacturing	3.3	3.4	2.8	2.8	3.1
	Tourism	3.0	3.9	2.8	2.8	3.1**
	Business services	3.4	3.9	2.5	2.8	3.2**
	Mean score	3.2**	3.8	2.7	2.8	
Low economic diversity in the region	Manufacturing	3.7	3.4	2.7	2.5	3.1**
	Tourism	3.2	3.8	2.6	2.4	3.0**
	Business services	3.3	3.6	2.5	2.3	2.9**
	Mean score	3.3**	3.7	2.6	2.4	
High geographic distance from customers	Manufacturing	2.5	3.0	2.0	2.1	2.4
	Tourism	2.3	2.7	2.0	1.9	2.2**
	Business services	2.5	2.4	2.0	1.8	2.2**
	Mean score	2.4**	2.6	2.0	1.9	
High geographic distance from suppliers	Manufacturing	3.9**	3.6	2.1	2.0	2.9**
	Tourism	2.5	2.5	1.9	1.8	2.2**
	Business services	2.7	2.4	1.8	1.7	2.2**
	Mean score	2.7**	2.6	1.9	1.8	

* $p < 0.05$, ** $p < 0.001$

Despite having relatively low scores, the five problems linked to geographic and economic constraints obtained a statistically higher mean score in the remote islands compared to core regions. This suggests that the specific locational characteristics of remote islands impose more problems for new firm formation in comparison to core regions, therefore supporting Hypothesis 4.

Conclusions and implications for policy

Much of the corpus of knowledge on regional development suggests that new firm formation is less challenging in core regions compared to remote islands, as in the former location there is both easier access to resources and there are institutions that facilitate transactional relationships. The analysis of the evidence of this study supports Hypotheses 1 indicating that firms in remote islands do perceive that they operate in a less favourable entrepreneurial ecosystem compared to the assessment of firms in core regions. This suggests that the external environmental conditions in remote islands may discourage new firm formation. Firms in core regions, such as Catalonia and Lisbon, perceive a more favourable social and demographic domain due to a range of factors. First, a better social network, possibly reflecting the movement of people and information into these regions, as well as more established institutions. Second, firms in core regions perceive that they have access to highly educated workers—this is consistent with published statistics which show a higher percentage of people with university degrees in Catalonia and Lisbon (in 2010). Third, the relatively superior business experience in the core regions probably reflects the greater exposure to different occupational compositions.

Firms in core regions perceive their economic and infrastructural domains to be more favourable compared to firms in the remote islands, reflecting the contrast in the levels of

economic development. Furthermore, firms in remote islands assigned lower scores to most of the factors in the technological domain compared to firms in core regions. This is consistent with Baldacchino's (1999) argument that remote (and island) regions suffer from inadequate access to technology; and reflects the lower levels of public and private sector investment in research and development (R&D) in these regions.

Overall, evidence from the survey shows that there are statistical significant differences between these remote islands and core regions in the majority of the six domains of the entrepreneurial ecosystem, and that the majority of the factors in these domains were considered to be more favourable in the two core regions, supporting much of the literature on entrepreneurial ecosystems and regional development. It should be stressed, however, that there are some aspects of the entrepreneurial ecosystem that were more favourable in the remote islands. Firms in remote islands perceive that support from governmental programmes (in the case of Madeira) and fiscal incentives were higher than assessed by firms in core regions. These findings show that local governments' actions will have an important role to play supporting local entrepreneurs in regions where distance, peripherality, and small size (and *islandness*) are major problems.

Regional development theory stresses that: limited access to resources, high transportation costs, and the difficulty in obtaining economies of scale in remote islands may limit the development of some sectors such as manufacturing. Additionally, the entrepreneurship literature emphasizes that the entrepreneur's perception of the scarcity or abundance of critical resources needed within a region will be a crucial element in his/her decision to create a new firm (Begley et al., 2005). Thus, the service sector, especially tourism, is perceived as offering more business opportunities to entrepreneurs in island regions. The analysis disaggregated by sector, in the case of the Canary Islands and Catalonia, shows that entrepreneurial opportunities vary across the regions depending on the sector of activity. This confirms Shane's (2003) view that the industrial, economic, political, and cultural context in which a person operates influences the decision to exploit entrepreneurial opportunities. Moreover, these results confirm Winters and Martins (2004) view that the development of some economic activities in remote islands—such as manufacturing—is particularly difficult. The results also support the argument that tourism is a critical area of activity in many small island states (Read, 2004); having a higher probability of success compared to other sectors (Chancellor et al., 2011).

It has been suggested that the structural characteristics of a region are responsible for regional variations in new firm formation rates (Davidsson et al., 1994). This study, however, shows that there are many similarities between new firm formation in remote islands and core regions. The three factors in new firm formation with the highest mean scores were similar between all regions: a good business idea, this is consistent with the findings from other empirical studies (e.g., Bosma et al., 2009; Orhan & Scott, 2001); the necessary capital; and the background experience and knowledge of the business, confirming Davidsson's (1991) study. Notwithstanding these similarities, the perceptions of the effectiveness of the entrepreneurial ecosystem to provide these factors does diverge between core regions and remote islands. Additionally, the two problems encountered when creating a firm with the highest mean scores were also similar in all four regions: finding sources of finance and cost of finance, in accordance with Evans and Jovanovic's (1989) findings. Despite the confirmation of hypothesis 4, the results show that problems faced by entrepreneurs in creating a new business will be similar in remote islands and core regions. Therefore, this study contributes to the literature, especially the resource dependence theory, by showing that despite variations in the external environment, the process of new firm formation is similar in both regions. Meaning that location will not influence the type of resources needed to create a firm, since entrepreneurs in remote islands or core regions need to assemble a group of similar resources. As a result, the scarcity or abundance of critical resources in an environment will be more influential on two other distinct phases: 1) on the decision to exploit an entrepreneurial opportunity; and 2) at a later stage, in the firms' survival and growth stage.

Implications for policy makers

The results show the important role that governments can play in the promotion and development of entrepreneurship, especially in remote islands. This study has identified practical aspects where governments can act in order to improve their entrepreneurial ecosystem. First, governments need to promote the adaptation of new technologies including use of the internet among local entrepreneurs, which will help businesses promotion and the identification of new business opportunities. Second, government should help create appropriate logistical conditions and support higher education in the information technology sector, to encourage the entrance of new entrepreneurs in this sector which is characterized by high growth businesses. Third, governments should promote interaction and cooperation between universities/research centres and firms to improve knowledge exchange and the absorptive capacity of local firms. Moreover, when attempting to strengthen local entrepreneurial ecosystems, policy makers must take into account local characteristics and the potential of the local economy—one policy will not fit all. As emphasized by Fritsch and Storey (2014, p. 950), policy "needs to reflect these differences (between rural and urban areas) and has to be tailored to local circumstances."

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References

Ács, Z., Szerb, L., & Autio, E. (2015). *The Global Entrepreneurship Index 2015*. Washington: The Global Entrepreneurship and Development Institute.

Aldrich, H., & Martinez, M. (2001). Many are called, but few are chosen: An evolutionary perspective for the study of entrepreneurship. *Entrepreneurship Theory and Practice, 25*(4), 41-56.

Amorós, J., Felzensztein, C., & Gimmon, E. (2013). Entrepreneurial opportunities in peripheral versus core regions in Chile. *Small Business Economics*, 40(1), 11-139. https://doi.org/10.1007/s11187-011-9349-0

Anderson, A.R. (2000). Paradox in the periphery: an entrepreneurial reconstruction?. *Entrepreneurship & Regional Development*, 12(2), 91-109. https://doi.org/10.1080/089856200283027

Armington, C., & Acs, Z. (2002). The determinants of regional variation in new firm formation. *Regional Studies*, 36(1), 33-45. https://doi.org/10.1080/00343400120099843

Armstrong J., & Overton, T. (1977). Estimating nonresponse bias in mail survey. *Journal of Marketing Research*, 14(3), 396-402. https://doi.org/10.2307/3150783

Audretsch, D. & Thurik, R. (2004). A Model of the Entrepreneurial Economy. *International Journal of Entrepreneurship Education, 2*(2), 143-166.

Baldacchino, G. (Ed.) (2015). *Entrepreneurship in small island states and territories*. New York: Routledge.

Baldacchino, G. (2006). Innovative development strategies from non-sovereign island jurisdictions? A global review of economic policy and governance practices. *World Development*, 34(5), 852-867. https://doi.org/10.1016/j.worlddev.2005.10.004

Baldacchino, G. (2005). Successful small-scale manufacturing from small islands: comparing firms benefiting from locally available raw material input. *Journal of Small Business & Entrepreneurship*, 18(1), 21-37. https://doi.org/10.1080/08276331.2005.10593330

Baldacchino, G. (1999). Small business in small islands: a case study from Fiji. *Journal of Small Business Management*, 37(4), 80-84.

Baldacchino, G., & Bertram, G. (2009). The beak of the finch: insights into the economic development of small economies. *The Round Table*, 98(401), 141-160. https://doi.org/10.1080/00358530902757867

Baldacchino, G., & Fairbairn, T. (2006). Entrepreneurship and small business development in small islands. *Journal of Small Business and Entrepreneurship*, 19(4), 331-340. https://doi.org/10.1080/08276331.2006.10593374

Baldacchino, L., Cassar, V., & Caruana, A. (2008). Start-up success in a small island state: a study among entrepreneurs in Malta. Island Studies Journal, 3(1), 73-96.

Beer, S. (2004). Information flow and peripherality in remote island areas of Scotland. *International Journal of Libraries and Information Services*, 54(3), 148-157. https://doi.org/10.1515/LIBR.2004.148

Begley, T., Tan, W., & Schoch, H. (2005). Politico-economic factors associated with interest in starting a business: a multi-country study. *Entrepreneurship Theory & Practice*, 29(1), 35-55. https://doi.org/10.1111/j.1540-6520.2005.00068.x

Bosma, N., Acs, Z., Autio, E., Coduras, A., & Levie, J. (2009). Global entrepreneurship monitor: 2008 executive report. Babson Park: Babson College.

Briguglio, L. (1995). Small island developing states and their economic vulnerabilities. *World Development*, 23(9), 1616-1632. https://doi.org/10.1016/0305-750X(95)00065-K

Bull, I., & Winter, F. (1991). Community differences in business births and business growths. *Journal of Business Venturing*, 6(1), 29-43. https://doi.org/10.1016/0883-9026(91)90004-W

Burnett, K.A., & Danson, M. (2017). Enterprise and entrepreneurship on islands and remote rural environments. *International Journal of Entrepreneurship and Innovation*, 18(1), 25-35. https://doi.org/10.1177/1465750316686237

Chancellor, C., Yu, C., & Cole, D. (2011). Exploring quality of life perceptions in rural Midwestern (USA) communities: an application of the core–periphery concept in a tourism development context. *International Journal of Tourism Research*, 13(5), 496-507. https://doi.org/10.1002/jtr.823

Cheng, S., & Li., H. (2011). Spatially varying relationships of new firm formation in the United States. Regional Studies, 45(6), 773-789. https://doi.org/10.1080/00343401003713415

Choi, Y., & Phan, P. (2006). The Influences of Economic and Technology Policy on the Dynamics of New Firm Formation. *Small Business Economics*, 26(5), 493-503. https://doi.org/10.1007/s11187-005-5989-2

Cosh, A., & Hughes, A. (2007). *British enterprise: thriving or surviving?: SME growth, innovation and public policy 2001–2004*. Cambridge: ESRC Centre for Business Research, University of Cambridge.

Cosh, A., Hughes, A., Bullock, A., & Milner, I. (2008). *Financing UK small and medium-sized enterprises: the 2007 survey*. Cambridge: Centre for Business Research, University of Cambridge.

Cromie, S. (1987). Motivations of aspiring male and female entrepreneurs. *Journal of Occupational Behaviour*, 8(3), 251-261. https://doi.org/10.1002/job.4030080306

Danson, M., & Burnett, K. (2014). Enterprise and entrepreneurship on islands. In: C. Henry & G. Mcelwee (eds.), *Exploring rural enterprise: new perspectives on research, policy & practice* (pp. 151-174). Bingley: Emerald.

Davidsson, P. (1991). Continued entrepreneurship: ability, need, and opportunity as determinants of small firm growth. *Journal of Business Venturing,* 6(6), 405-429. https://doi.org/10.1016/0883-9026(91)90028-C

Davidsson, P., Lindmark, L., & Olofsson, C. (1994). New firm formation and regional development in Sweden. *Regional Studies*, 28(4), 395-410. https://doi.org/10.1080/00343409412331348356

Dubini, P. (1989). The influence of motivations and environment on business start-ups: some hints for public policies. *Journal of Business Venturing*, 4(1), 1-6. https://doi.org/10.1016/0883-9026(89)90031-1

European Union (2017). *Entrepreneurship on islands and other peripheral regions*. Bruxells: European Committee of Regions.

Evans, D., & Jovanovic, B. (1989). An estimated model of entrepreneurial choice under liquidity constraints. *Journal of Political Economy*, 97(4), 808–827. https://doi.org/10.1086/261629

Frederick, H., & Monsen, E. (2009). New Zealand's perfect storm of entrepreneurship and economic development. *Small Business Economics*, 37(2), 187-204. https://doi.org/10.1007/s11187-009-9234-2

Fritsch, M., & Schindele, J. (2011). The contribution of new businesses to regional employment—an empirical analysis. *Economic Geography*, 87(2), 153-180. https://doi.org/10.1111/j.1944-8287.2011.01113.x

Fritsch, M., & Storey, D. (2014). Entrepreneurship in a regional context: historical roots, recent developments and future challenges. *Regional Studies*, 48(6), 939-954. https://doi.org/10.1080/00343404.2014.892574

García-Rodríguez, F., Gil-Soto, E., Ruiz-Rosa, I., & Gutiérrez-Ta-o, D. (2016). Entrepreneurial process in peripheral regions: the role of motivation and culture, *European Planning Studies*, 25(11), 2037-2056. https://doi.org/10.1080/09654313.2016.1262827

Gartner, W. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy Management Review,* 10(4), 696-706.

Goodall, B. (1987). *The Penguin dictionary of human geography*. Harmondsworth: Penguin.

Goodbody (2002). *Entrepreneurship in Ireland*. Dublin: Goodbody Economic Consultants.

Greve, A., & Salaff, J. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory & Practice*, 28(1), 1-22. https://doi.org/10.1111/1540-8520.00029

Grydehøj, A., Pinya, X., Cooke, G., Doratli, N., Elewa, A., Kelman, I., Pugh, J., Schick, L., & Swaminathan, R. (2015). Returning from the horizon: introducing urban island studies. *Urban Island Studies*, 1, 1-19. https://doi.org/10.20958/uis.2015.1

Isenberg, D. (2010). How to start an entrepreneurial revolution. *Harvard Business Review*, 88(6), 40-50.

Isenberg, D. (2011). *The entrepreneurship ecosystems strategy as a new paradigm for economic policy: principles for cultivating entrepreneurship*. The Babson Entrepreneurship Ecosystem Project, May 11th. Retrieved from http://entrepreneurial-revolution.com/2011/05/11/the-entrepreneurship-ecosystem-strategy-as-a-new-paradigm-for-economic-policy-principles-for-cultivating-entrepreneurship/

Kaufmann, D., & Malul, M. (2015). The dynamic brain drain of entrepreneurs in peripheral regions. *European Planning Studies*, 23(7), 1345-1356. https://doi.org/10.1080/09654313.2014.929639

Kirchhoff, B., Newbert, S., Hasan, I., & Armington, C. (2007). The influence of university R&D expenditures on new business formations and employment growth. *Entrepreneurship Theory and Practice*, 31(4), 543-559. https://doi.org/10.1111/j.1540-6520.2007.00187.x

Klappera, L., Laevena, L., & Rajanc, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, 82(3), 591-629. https://doi.org/10.1016/j.jfineco.2005.09.006

Levie, J., & Autio, E. (2008). A theoretical grounding and test of the GEM model. *Small Business Economics*, 31(3), 235-263. https://doi.org/10.1007/s11187-008-9136-8

Lovelock, B., Lovelock, K., & Normann, O. (2010). The big catch: negotiating the transition from commercial fisher to tourism entrepreneur in island environments. *Asia Pacific Journal of Tourism Research*, 15(3), 267-283. https://doi.org/10.1080/10941665.2010.503616

Martin, P. (2003). Public policies and economic geography. In B. Funck & L. Pizzati (Eds.), *European integration, regional policy, and growth* (pp. 19-32). Washington: World Bank.

Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth oriented entrepreneurship. Background paper presented at the workshop organised by the OECD LEED Programme and Dutch Ministry of Economic Affairs, The Hague, 7 November.

Mason, C., & Harvey, C. (2013). Entrepreneurship: contexts, opportunities and processes. *Business History*, 55(1), 1-8. https://doi.org/10.1080/00076791.2012.687542

Moore, J., (1993). Predators and Prey: A new ecology of competition. *Harvard Business Review*, 71(3), 75-86.

OECD (2004). *Fourth community innovation survey*. OECD, 20 October. Retrieved from http://www.oecd.org/dataoecd/52/35/40140021.pdf

Orhan, M., & Scott, D. (2001). Why women enter into entrepreneurship: an explanatory model. *Women in Management Review*, 16(5), 232-243. https://doi.org/10.1108/09649420110395719

Quince, T., & Whittaker, H. (2002). *Entrepreneurs and their business*. Cambridge: Centre for Business Research, University of Cambridge.

Read, R., (2008). Foreign direct investment in small island development states. *Journal of International Development*, 20(4), 502–525. https://doi.org/10.1002/jid.1477

Read, R., (2004). The implication of increasing globalization and regionalism for the economic growth of small island states. *World Development*, 23(2), 365-378. https://doi.org/10.1016/j.worlddev.2003.08.007

Reynolds, P., Storey, D., & Westhead, P. (1994). Cross-national comparisons of the variation in new firm formation rates. *Regional Studies*, 28(4), 443-456. https://doi.org/10.1080/00343409412331348386

Romanelli, E. (1989). Environments and strategies of organisation start-up: effects on early survival. *Administrative Science Quarterly*, 34(3), 369-387. https://doi.org/10.2307/2393149

Shane, S. (2003). *A general theory of entrepreneurship: the individual-opportunity nexus*. Cheltenham: Edward Elgar. https://doi.org/10.4337/9781781007990

Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11(4), 448-469. https://doi.org/10.1287/orsc.11.4.448.14602

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226. https://doi.org/10.5465/AMR.2000.2791611

Spilanis, I., Kizos, T., Vaitis, M., & Koukourouvli, N. (2013). Measuring the economic, social and environmental performance of European island regions: emerging issues for European and regional policy. *European Planning Studies*, 21(12), 1998-2019. https://doi.org/10.1080/09654313.2012.722970

Sufrauj, S. (2011). Islandness and remoteness as resources: evidence from the tourism performance of small remote island economies (SRIES). *European Journal of Tourism, Hospitality and Recreation*, 2(1), 19-41.

Sutaria, V., & Hicks, D. (2004). New firm formation: dynamics and determinants. *The Annals of Regional Science*, 38(2), 241-262. https://doi.org/10.1007/s00168-004-0194-9

Tamásy, C. (2006). Determinants of regional entrepreneurship dynamics in contemporary Germany: a conceptual and empirical analysis. *Regional Studies*, 40(4), 365-384. https://doi.org/10.1080/00343400600612137

Welter, F. (2011). Conceptualising entrepreneurship in a transition context. International *Journal of Entrepreneurship and Small Business*, 3(2), 165-184.

Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1), 27-55. https://doi.org/10.1023/A:1008063200484

Winters, I., & Martins, P. (2004). When comparative advantage is not enough: business costs in small remote economies. *World Trade Review*, 3(3), 347-383. https://doi.org/10.1017/S1474745604001922

Yusuf, A. (1995). Critical success factors for small business-perceptions of South-Pacific entrepreneurs. *Journal of Small Business Management*, 33(2), 68-73.

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Passport sales: how island microstates use strategic management to organise the new economic citizenship industry

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ABSTRACT: Passport sales programmes have concentrated in island microstates. This paper analyses organisational factors and strategic management leading to comparative success or failure of these economic citizenship programmes. Each passport sales business in the Pacific islands has had a brief life—the majority continuing for a few years, at most. They evolved within a precarious and disorderly environment—frequently with a fast ascent, before they crashed. Collapse has often been followed by similar short-lived schemes in the same Pacific island country. Yet other passport sales enterprises in Caribbean and European island microstates endure and even thrive. The comparative success or failure of passport sales ventures around the world depends significantly on how they are organised. This paper outlines similarities in the organisational styles of the Pacific island programs—as isolates. In examining programmes elsewhere in small island states in Europe and the Caribbean, it analyses the types of organisations that are more likely to lead to a more enduring success—foreign professional agencies and subcultures.

Keywords: globalisation, economic organisation, island microstates, MIRAB, passport sales, SITE/PROFIT, strategic management

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Introduction

The innovative strategic management perspective in island studies suggests that small island countries prosper to the degree that they implement effective organisational strategies to take advantage of unusual niche opportunities offered by the international political economic environment (Baldacchino, 2006a, 2006b, 2007a, 2007b, 2010, 2015; Baldacchino & Bertram, 2009; Bertram, 2006; Bertram & Poirine, 2007). Strategic management is about optimally positioning organisations in relation to stakeholders and rivals—developing strategies that suit their (often unique) natures and environments to secure competitive advantages. Island microstates succeed to the extent that they supply what people and organisations in continental countries want.

Island microstates develop innovative forms of sovereignty, unique status arrangements that challenge mainstream (and mainland) orthodoxies and models. In a number of niche industries, they meet needs better than large countries (Baldacchino & Bertram, 2009). Taking advantage of globalisation by "using local rules to tap non-local resources" (Drucker, 1986, ctd. in Baldacchino, 2010, p. 73, p. 91, p. 190) is the most useful managerial strategy for island microstates. This article considers how small island states organise their lucrative passport sales (or economic citizenship) programmes.

Selling passports and citizenship is an emerging industry concentrated in small island tax havens or offshore financial centres. Passport sales revenues reached an estimated US$2 billion in 2016 (CBS, 2017). Commoditised or economic citizenship is a new product, entering a new

market with new sources of supply and new forms of organisation, centred in island tax haven microstates that became politically independent after the Second World War.

This new industry's success is driven by globalisation, the rise of free market principles, and erosion of mononational, communal, and state-building concepts of citizenship. Global capitalism brings unprecedented mobility and fluidity and forced the invention or discovery of substitutes for conventional passports for many rich or relatively affluent people, especially from emerging countries with passports granting few powers of action. A passport of convenience from an island microstate confers expanded visa-free entry and residence rights in rich countries and regions, lower taxation, and other instrumental advantages. Passport purchasers buy 'shadow nationality' (Ronkainen, 2011), a touristic rather than rooted experience of citizenship—requiring (almost) no residency, participation, or loyalty.

This paper analyses the organisational factors that have led to the comparative success or failure of passport sales programmes. The Pacific island country experience provides valuable lessons. Each passport sales programme in Pacific island countries has had a relatively brief life, the majority continuing for a few years, at most. They have evolved within a precarious and disorderly environment, frequently with a fast ascent, before they crashed. Collapse has often been followed by similar short-lived schemes in the same Pacific island country. Yet other passport sales programmes in Caribbean and European island microstates have persisted and even prospered. This paper suggests that the comparative success or failure of passport sales ventures around the world depends significantly on how they are organised. It is primarily about the organisation of supply, not demand. The paper outlines similarities in Pacific island country programmes' organisational styles. It analyses the types of passport sales programme organisation in other island microstates that have led to more enduring successes or best practices.

Passport sales programmes' progress depends on how they are organised—either as *isolates*, *foreign professional agencies*, or *subcultures* (van Fossen, 2012). These terms refer to how particular passport sales programmes and entire offshore financial centres are organised. This paper develops and analyses these three organisational models.

Isolate

Isolates are apart, operating separately and disconnected from the passport sales programme community. These include passport sales in the Pacific island countries of Tonga, the Marshall Islands, Nauru, Vanuatu, Samoa, and Kiribati. This paper concentrates on these Pacific island country schemes, although similar isolate passport selling ventures may have existed in other parts of the world as well. Belize (1995-2002) and Grenada (1997-2001) also appear to have had isolates selling passports. I am planning more research into these cases.

These isolates have not been members of associations coordinating economic citizenship nor have they cooperated with passport sales programmes in other countries. These isolates have had offshore financial centres, but selling passports has been mostly disconnected or (at most) weakly linked to other offshore activities. This situation limited their support networks and access to peer evaluation of their activities, additional opportunities, and strategies for dealing with metropolitan governments hindering their passport sales programmes. This restricted their passport sales programmes' sophistication. They have often been erratic, providing one-off, discrete, and poorly integrated services.

An isolate's government may be a passport 'wholesaler' to one or more foreign retailers (frequently of uncertain reliability), or it may market these itself or through a domestic retailer. Honorary consuls or diplomats in Asia (particularly Hong Kong) have been very important retailers, as have a number of micro-entrepreneurs there. Sometimes local politicians or bureaucrats sell passports for campaign contributions, favours, or outright payoffs. The government may do little effective monitoring of retail dealers. The isolate's extremely low level of 'red tape' may appeal to some clients, at least initially or in the short term. Retailing activities tend to be

distinct and uncoordinated, with little mutual assistance between them. Few rules or standards may be imposed. Performance may be largely invisible. The passport-issuing government's disciplinary measures against illegitimate operations may be weak. Some passport retailers may ignore, evade, resist, or disobey any governmental attempts to restrain, discipline, or audit their activities. According to a number of accounts, many retailers in isolate schemes have not remitted appropriate passport sales proceeds to the Pacific island country governments issuing the passports.

If the isolate programme is official and institutionalised (rather than being informal or unlawful), the government may establish a special entity or sovereign wealth fund to receive the income from the passport sales programme (such as the Tonga Trust Fund that received profits from Tonga's passport sales). Most frequently, however, the benefits and responsibilities in relation to official programmes are supposed to go to the general accounting budget or to some pre-existing government agency, which may not grant the passport sales programme great importance (as in the Marshall Islands and Kiribati). Much of the income from passport sales may never reach the government—because the proceeds are stolen or the sales are unlawful. The isolate's fringe character limits avenues to reputable legal, financial, and accounting services—losing substantial funds through bad governance, lack of transparency, ineptitude, poor advice, theft, fraud, or corruption.

Isolates are likely to attract racketeers (foreign or domestic) trying to retail wholesale passports. Unlike foreign professional agencies (considered below), these promoters lack professionalism. Even if they are given monopolies, as in Tonga and Nauru, they may not provide significant income for the Pacific island country itself—channelling substantial profits toward their personal or familial accounts rather than to general public funds.

Transparency has been absent in isolate Pacific island programmes. The Tonga Trust Fund was exempted from public accounting. Its monies were held apart from the government's ordinary revenues. The media suggested that other hidden foreign accounts held more sales money. Between 1982 and 1996 about 8,450 Tongan passports were sold, generating gross revenues of approximately US$92.95 million or 6.5% of the country's gross domestic product in these years (see Table 2; van Fossen, 2007). Tens of millions of dollars of profit have been derived from passport sales and deposited in the Tonga Trust Fund, where they were mixed with about US$2 million of income from Tonga's leasing of geostationary space to provide a flag of convenience for satellites between 1996 and 1999 (van Fossen, 1999, 2007). Only small proportions of these large amounts (most of which were held in the US) went to the kingdom's internal development (Table 1) and most of the funds that have been forthcoming were in the form of loans, not grants—so that in 2000 US$12,022,050 of advances to the Tonga government were held as Tonga Trust Fund assets (*Tonga Government Gazette*, 2001). There has been little domestic legislative control over these ventures. Most people in Tonga's political circles believe that the Tonga Trust Fund has been ultimately controlled by, and for, the Tongan royal family's benefit.

In the Marshall Islands in May 2002 the Attorney General's Office lamented that there were no official records of sales through agents or of revenues (*Marshall Islands Journal*, 2002). In Vanuatu it was impossible to determine how many ordinary passports were granted to foreigners; at least 29 diplomatic and 42 official passports had been issued (only six of these being formally accepted by a receiving country). In both countries substantial passport sales appear to have come from prominent politicians ordering bureaucrats to issue the documents, with a few cases of bureaucratic underlings pursuing their own personal ends.

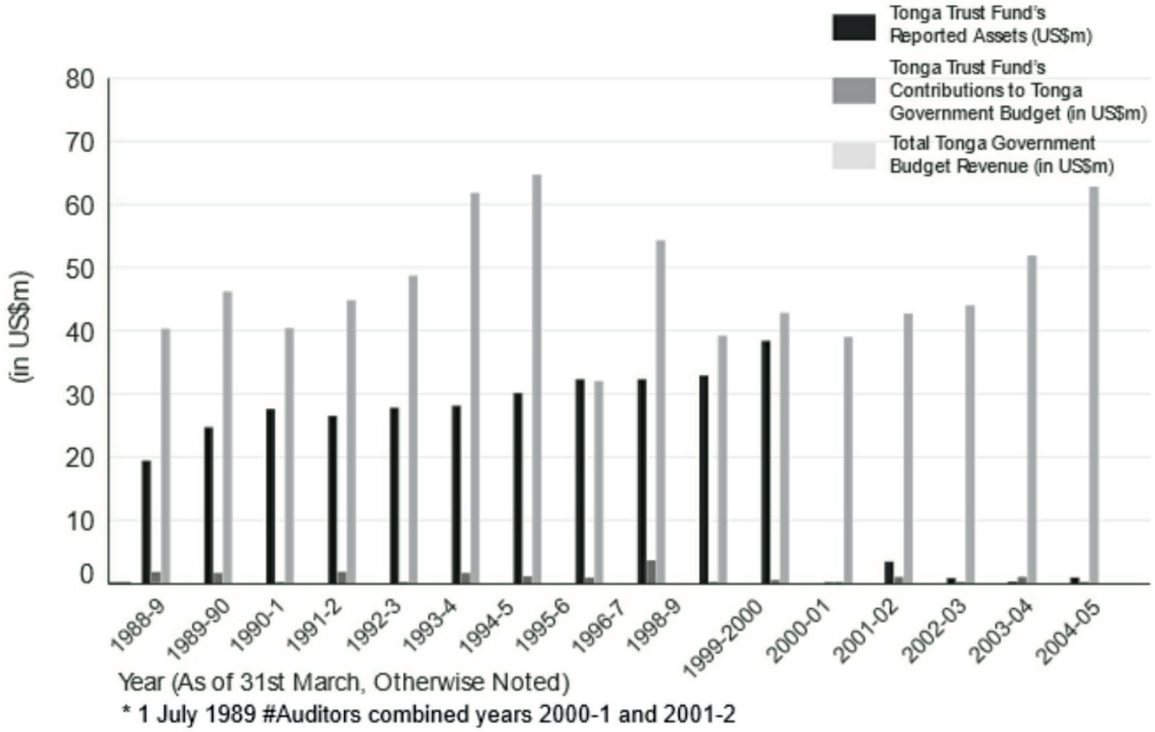
Tonga Trust Fund audited accounts were only published after massive protests by the pro-democracy movement there and court orders to publish. Generally, however, in isolates prosecutors fail to pursue cases against those benefitting illicitly from passport sales programmes. Where there are court decisions or ombudsman's reports against those involved in unlawful passport issuance in Pacific island isolates, the decisions and reports have often been ignored or evaded.

Promoters in isolates frequently see passport sales as a way to acquire considerable income for relatively little effort and often improvise relatively undefined, formless, and temporary networks for their passport transactions. A small number of insiders may gain substantial wealth,

even if they lose a portion of their profits in a reverse windfall (such as the Tonga Trust Fund's extraordinarily poor investments).

In Tonga a scandal developed in 2001 and 2002 when it was revealed that over US$30 million of the Tonga Trust Fund assets had been lost in buying high risk and fraudulent investments (including life insurance policies speculating on influential Americans' early deaths). These had been mostly purchased under the advice of an American manager, Jesse Dean Bogdanoff, who doubled as the Tongan king's court jester. Bogdanoff and two co-accused reached a secret out-of-court settlement in February 2004, when they allegedly agreed to pay the Trust Fund about one million US dollars. There has been no real public accounting since 2005 for whatever assets may remain in the Tonga Trust Fund.

Table 1: Assets of the Tonga Trust Fund.



Sources: International Monetary Fund, Tonga: Staff Report, 9/10/98, 16/1/03, 17/5/06; Tonga, *Budget Statement for the year by the Minister of Finance* 1989-1996; National Reserve Bank of Tonga, *Quarterly Bulletin* 1993-2006; *Report of the Minister of Finance* 1997, 1998, *Tonga Chronicle* 3/6/99; *Tonga Government Gazette* 28/10/92, 26/5/93, 31/96, 29/2/96, 30/6/97, 26/2/98, 31/7/98, 10/8/99, 29/9/00, 18, 21/9/01, 22/11/02.

Popular concerns about theft and improper accounting of proceeds from isolate passport sales programmes in Tonga and the Marshall Islands have been overshadowed by the greater local concern with the long-term consequences of large influxes of Chinese passport holders and their quick ascent in local business (particularly retail trade). The (ultimately false) assumption that passport purchasers would not settle in the issuing country helped convince those domestic interests who benefited that the schemes could remain secret. Yet this secrecy destabilised the schemes. Passport sales are very sensitive in any island state. Generally islanders are preoccupied with issues of migration, whether immigration or emigration, and are frightened of being flooded by migrating continentals (McCall, 1994, pp. 4-5).

In the Marshall Islands the scheme generated serious secondary problems—including Asian illegal aliens and over-stayers without Marshalls passports on one-month tourist visas who worked

in passport purchasers' businesses for years (many without pay). It was difficult and expensive for the government to apprehend, try, and deport them. In October 2003 the Marshall Islands Assistant Attorney-General, Jack Jorban, insisted that passport sales had distinctly marginalised indigenous Marshallese and Americans, so that they no longer controlled the country's economy (van Fossen, 2007).

Pacific islanders, believing that passport sales were illegitimate, became hostile toward immigrants thought to have purchased citizenship—creating insoluble conflicts, particularly in Tonga. A large-scale riot in Tonga's capital of Nuku'alofa on 16 November 2006 especially targeted larger Chinese-owned businesses that had appeared since the passport sales programme began and enterprises owned by the passport-selling royal family. Attacks there caused US$60.5 million of damage (*Pacific Islands Report*, 2006). Many Tongans expressed concern about the uncertainties that the programme had brought to their longer-term prospects and their nation's future.

In 2016 Tonga's Prime Minister 'Akilisi Pohiva decried the continuing illegal sales of ordinary and diplomatic passports by corrupt officials. He expressed frustration that only lower level functionaries were being arrested. Pohiva accused some members of the local power elite, including his predecessor former Prime Minister Lord Tu'ivakano (currently Parliamentary Speaker), of having unlawfully pressured immigration authorities to illegally issue passports, primarily to Chinese citizens. Pohiva cited Sien Lee and his wife, who received 15 ordinary passports and 7 diplomatic passports since 2003. Pohiva alleged that illegal passport sales were linked to the methamphetamine ('ice') trafficking that was ravaging the country and region and to an "onslaught of transnational crime" afflicting Tonga. The New Zealand government expressed concern about Tonga's passport situation (Ensor & Wall 2016; Pacnews, 2016a, 2016b; RNZI 2016a, 2016b; Wall & Ensor 2016).

Generally, the least appealing clients (frequently oriented toward shadowy activities) are inclined to use isolates, which may be their only option. The isolate's predicament is often noticed by other countries and international organisations and leads to condemnation. Often isolates' passports 'work' for clients, but sometimes they do not 'work'. Even (and perhaps especially) when they 'work' for dubious purchasers (for example, for facilitating the international mobility of criminals, terrorists, and unwanted migrants) they raise legitimacy questions. Their direct or indirect role in taking advantage of third parties pulls down passport sales programmes' reputation in general and prompts calls for more regulation.

Vanuatu passport holders included people with criminal or dubious histories, or no recorded address. Vanuatu's international status was lowered and some countries (e.g., Canada) reinstated visa requirements for Vanuatu's nationals (*Vancouver Sun*, 2001).

Nauru's passport sales programme started in 1998, notwithstanding Australian threats to stop recognising Nauru's passports—affecting many Nauruans living in Melbourne. Foreign governments' antagonism grew after the 11 September 2001 terrorist attacks. Some alleged terrorists carried Nauru passports. Two suspected terrorists from the Turkestan Liberation Organization were seized carrying Nauru passports bought without any background checks. Andriy Simonyan, an alleged terrorist from Azerbaijan, purchased a Nauru passport for US$15,025 on 26 October 1998 and moved to Hangzhou, China, where he was apprehended in 2003 after allegedly stabbing a US citizen and preparing a terrorist offensive on Americans. In February 2003 two suspected al-Qa'ida agents holding Nauru passports were captured in Malaysia. The US forced the hand of Nauru's new President Bernard Dowiyogo. He signed an executive order terminating his country's passport sales and offshore banking ventures on 27 February 2003, while in a Washington, DC hospital for a heart condition; he died ten days later.

The credibility of all passports from Nauru, the Marshalls, Tonga, Samoa and Vanuatu has been harmed, as they have been associated with dubious purchasers. In 2015, for example, American authorities refused to accept a Marshall Islands passport as a valid identity document for a naturalised citizen to enter the US (*Marshall Islands Journal,* 2015). Foreign countries

restructured visa restrictions and innocent citizens-by-birth were challenged, denied entry, or delayed in their journeys.

Isolates' passport sales activities may be burdened by contradictory goals, as they may oppose other, more important objectives of the isolates' nation-state (for example, maintaining a favourable global reputation or co-operating with powerful metropolitan states). Most passport sales programmes in isolates have bad images. Frequently scandals drive them to curtail their operations. Isolate programmes typically have low accountability to the general citizenry and even to their clients. They often run into trouble when powerful foreign governments or mass media coverage raise an alarm, pressuring political leaders to respond.

Domestic opposition appears particularly after local independent media, democratically elected political leaders, and whistleblowers reveal the schemes' clandestine operations. This opposition in isolates has been personified most dramatically by the Tongan Pro-Democracy Movement and the Vanuatu Ombudsman's Office—which the local independent media portray as heroic crusaders, fighting against corruption and the devaluation of their countries' citizenship. There is, however, no guarantee that whistleblowers and their political reformer allies will be victorious in the end. Tony Audoa, Nauru's former Justice Minister, found that passport sales had harmed Nauru's international image and that politicians, illegally receiving income from sales, quashed police investigations. Concern was expressed that powerful people who benefited from sales might sway the outcome of Nauru's 3 May 2003 election, in which the scheme was a significant issue, and continue to lobby for its reintroduction.

Isolate programmes often suffer from discontinuity and scandal. Just as the oldest Pacific island passport sales programme (Tonga's) had a number of discrete versions, so Vanuatu's first official venture has been plagued by irregularities in its short history. Vanuatu suspended its original scheme (Capital Investment Immigration Plan) in May 2015 after it had operated for less than two years. There were concerns about its allegedly not meeting promised revenue targets and the quality and quantity of applicants. A shadowy Hong Kong retailer allegedly proposed that it sell citizenships to Chinese applicants such as a Triad member, a financial criminal, and a money launderer and member of an illegal drug trafficking organisation—along with their families. Pressure was allegedly exerted on Vanuatu's government to approve the applications. The Capital Investment Immigration Plan was suspended on 11 June 2015 and immediately replaced by another scheme (Honourary Citizenship), with Pacific Resource Group operating as retailer for greater China (including the PRC, Hong Kong, Taiwan, and Macau), as well as Russia. Vanuatu's government stated that it revoked about thirty citizenships that had been granted illegally and suspected that it would revoke more. On 21 March 2016 the original Capital Investment Immigration Plan project was reactivated—despite continuing concerns about false advertisements, and illegal collection of funds for unauthorised Vanuatu passport sales to Chinese. The unsanctioned advertisements stated that applicants did not need to explain the source of their funds. A third avenue to citizenship, a Real Estate Option Plan, proposed by Vanuatu Migration Services Ltd., was approved by the government on 2 September 2015 (Garae, 2015; Vanuatu, 2016; Willie, 2015a, 2015b).

There have been severe conflicts between the retailers of the three programmes. On 22 December 2015 Vanuatu Registry Services of Hong Kong lodged a civil lawsuit for breach of contract and conspiracy (in relation to weakening its privileged position within the Capital Investment Immigration Plan). It litigated against the Vanuatu government, PRG (Pacific Resource Group) Consulting of Hong Kong, Vanuatu Migration Services, as well as former Prime Minister Sato Kilman, former Attorney General (currently Opposition leader) Ishmael Kalsakau, Henry Tamashiro (Director of Immigration), and Henry Bogiri (former Director of Internal Affairs). The local media were keen to follow the case, in view of the widespread popular opposition to passport sales. As the case was still pending in court, in late November 2016 Opposition Leader Kalsakau complained that substantial passport revenues were unaccounted for. Furthermore, he claimed that Prime Minister Charlot Salwai had approved still another (a fourth)

passport sales programme ('The Contribution Program') in October 2016, signing an agreement with a mysterious one-director shell company (Joshua, 2015, 2016; Makin, 2016; Vanuatu, 2015).

A major scandal broke, indicating the reputational damage done by illegal Vanuatu passport sales before the official programmes started. In March 2016 in the Philippines a Vanuatu passport was found on Kim Wong, aka Kam Sin Wong, after he was accused of being the mastermind of a scheme that electronically stole almost US$81 million from the Bangladesh Central Bank's account at the US Federal Reserve Bank of New York the previous month. By December 2016 Wong had returned only US$15 million of the US$35 million that he admitted receiving from the money stolen from Bangladesh's central bank—leaving the other US$66 million still missing. On 23 August 2001 Wong had been called before a Philippines Senate Committee, accused of being the conduit to the illegal drug mafia for his friend (and former Philippines National Police Chief) Senator Panfilo Lacsin. Wong and Lacsin denied the accusations and neither was successfully prosecuted. Wong, a Chinese national despite living in the Philippines for about fifty years, reportedly used his Vanuatu passport for entering and leaving the Philippines since 2009 (Antiporda & Canlas, 2016; Cababallo, 2016; Canlas, 2016; *Financial Express*, 2016; Lopez, 2016; Mogato & Morales, 2016; Punay, 2016). These scandals and questions about whether Vanuatu's government still needs passport revenues for the country's economic rehabilitation after cyclone devastation in 2015 add uncertainty about the future of the country's official passport sales programmes.

Samoa's Citizenship Investment Bill was proposed by the ruling party in 2014 and quickly became controversial. The general public rejected the passport sales programme—citing fears that foreign investors (who would presumably be mostly or exclusively Chinese) would threaten local businesses and access to land. A minority felt that the passport sales programme was necessary to attract the most productive investors to Samoa. Prominent local lawyers questioned the applicants' background checks' adequacy and the process's integrity in face of evidence of misuse of public funds at the highest levels. They wondered why the bill was created by the Ministry of Commerce, Industry and Labour. They emphasised the absence of anti-corruption legislation in the country, which had not signed UN and OECD conventions against corruption and bribery. Samoa's parliament passed the bill in October 2015, but formulation of relevant regulations was delayed. The parliamentary opposition stated that a 2016 amendment proposed by the government would dangerously extend citizenship to two additional generations of the passport purchaser's family—threatening indigenous Samoans' control over their land and economy (Polu 2015; RNZI, 2015; Samoa, 2014a, 2014b: pp. 3-4; *Samoa Observer*, 2015; Tupufia, 2016; US, 2015).

From potential clients' standpoints, Samoa may not be attractive. The minimum investment is 4 million Samoan Tala (about US$1.5 million), there are bureaucratic hurdles to overcome, and citizenship is only granted after three years—with a minimum residency of 15 days a year (Samoa, 2014a). By contrast, Vanuatu citizenship can be obtained by paying about US$200,000 for honorary citizenship or about US$300,000 (US$260,000 in investments and US$40,000 in fees) for Capital Investment Immigration Plan citizenship. Only a brief visit to Vanuatu is required. The official Samoan scheme may be stillborn.

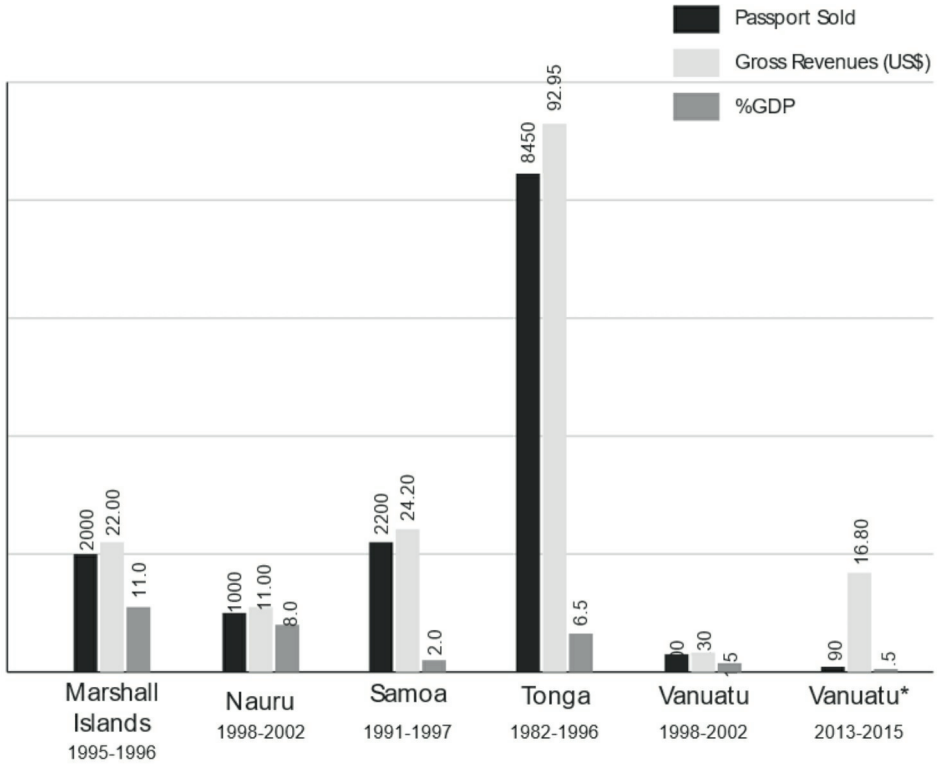
Most passport sales programmes in isolates are entirely or all but abandoned relatively soon after their inauguration; substantial numbers of passports may be cancelled. Exposure of hidden details by the media and by democratic interests demanding transparency led to invalidation of many passports sold by Pacific island isolates because sales were unlawful, some purchasers were disreputable, and secrecy concealed corruption. The Marshall Islands offer a case in point. Assistant Attorney-General Jack Jorban said that almost every purchased passport was issued unlawfully—and could be cancelled, and that Cabinet had not approved any passport sold below US$100,000, as required by law. Jorban stressed that purchased passports were only identification documents and not proof of citizenship (*Marshall Islands Journal*, 2003).

Cheating and opportunism (with frequent misrepresentation by sellers and numerous illegal sales) generate high transaction costs. Most unlawful passports are not renewed—with subsequent write-offs for buyers. In the isolate schemes examined here there are few if any binding

agreements, official contracts, durable arrangements, proper supervision procedures, or usable enforcement practices (which all lower transaction costs). Instead, isolate passport sales programmes assumed a form which historically has thwarted success in economies, polities, and societies world-wide. Characteristically corruption abets elite enrichment—without negotiations with citizens to extend more power, democracy, or resources to them in exchange for revenues—for example, in the form of schools and hospitals (OECD, 2014).

However, an isolate passport sales programme can generate significant revenues during its relatively short active lifespan—for example, 11% of the Marshall Islands gross domestic product (GDP) over two years (see Table 2 for Pacific island country isolates' cases).

Table 2: Passport sales of Pacific Islands isolates.



* Legal sales from September 2013 to September 2015 through Vanuatu's Official Capital Investment Immigration Program and Honorary Citizenship Program only.

Sources: International Monetary Fund, *Vanuatu*, 2013-2015; van Fossen, 2007.

The repeated failures of isolate passport sales programmes trigger irritation, accusations, and perplexity about the issued passports' status and the proceeds' destination. Closing a programme in an isolate is often a device for getting it off the political agenda and shielding the people involved from further investigations and media attention. The isolate programme's country has a bad reputation for a while (leaving a number of clients who feel victimised and citizens with more restricted travel options). Yet this stigma is likely to fade (but not disappear) over time. This reopens possibilities for a new round of profitable passport sales, at least on a small scale or if they can be hidden. While one passport sales programme may disappear in an isolate, another may arise. Frequently the same isolated organisational arrangement is used in the new venture, with the same chronic insecurity and unpredictability that are detrimental to passport sales programmes' success over the longer term.

Passport sales in isolates still happen. Politicians, government workers, and other insiders may extract considerable unearned profits from sales and they may continue to issue passports privately even where there has been the establishment of legislatively ratified official programmes that are

designed to provide substantial funds to the government. A few members of the elite can receive high incomes (for little cost) by undercutting the prices that are charged by the official programmes.

Foreign professional agencies

St. Kitts and Nevis (from 2007), Grenada (from 2013), Malta (from 2014), Dominica (from 2014), and St. Lucia (from 2016) have operated their passport sales programmes most often through an authorised foreign professional agency. The foreign professional agency has a contract or concession from the government and shapes the scheme's legal and managerial structures professionally. The foreign professional agency also supplies daily administrative services, such as promotion and marketing and receiving, screening, and recommending applications. The foreign professional agency may be the exclusive private company or merely the dominant force shaping a country's passport sales programme—and there may be numerous unrelated and subordinate sales organisations in many parts of the world. These programmes are managed primarily from the agency's headquarters in another country, although the foreign professional agency also retains an operational office in the passport selling country itself. Henley & Partners, with its registered base in the Jersey offshore financial centre, has moulded the St. Kitts and Nevis (from 2007 to 2013) and Malta programmes. London's CS Global Partners has been the only official consultant and central marketer for Grenada's scheme since 2013. CS Global is also responsible for creating major structural changes to Dominica's scheme in 2014 and served as the foreign professional agency for St. Kitts and Nevis since 2013. CS Global shares substantial power over St. Lucia's venture with Montréal's Arton Capital.

The foreign professional agency seriously endeavours to connect the country's passport sales programme with similar programmes in other jurisdictions and with the international passport and visa regulation system on favourable terms. The foreign professional agency provides the passport selling country with significant expertise, instruction, support services, customers, opportunities, and promotion for its programme, as well as intellectual justifications, political strategies, and professional lobbying for dealing with actual or potential challenges.

The foreign professional agencies' professionalism means that they have direct access to expert lawyers, accountants, and other professionals, but the services of less expensive passport selling foreign professional agencies may be somewhat 'McDonaldized' (Ritzer, 2004), highlighting quick, dependable, stable, economical, and somewhat anonymous service, where customers understand what to expect. The foreign professional agency ordinarily makes concerted efforts to continue good relations with its customers, while the isolate may sell temporary, one-off passports to random customers (whose passports are often not renewed).

The foreign professional agency solicits for the passport providing country and exercises strong managerial powers—with a long-term concession or contract assuring substantial returns from the venture. The foreign professional agency structures the passport sales operation and anticipates compliance with its directives. The Malta programme has been formed by Henley & Partners' expertise, developed over a number of years as the exclusive agency for managing the St. Kitts and Nevis programme from 2007 to 2013, and St. Lucia's development was influenced by CS Global Partners' and Arton Capital's broad experience in the global economic citizenship industry.

In 2015 annual contributions to island microstate GDP from foreign professional agency passport sales were 1.8% in Malta (*Malta Today,* 2016), 4.9% in Dominica (IMF, 2016a), and 11.9% in St. Kitts and Nevis (IMF, 2016b). While the foreign professional agency relationship can be viewed as constructed on mutual self-interest of the passport-providing country and the foreign professional agency, there may also be suspicion between them. Questions may arise about: (1) why a foreign company is managing part of a sovereign state's passport sales programme, (2) the foreign professional agency's and scheme's transparency and accountability, (3) inadequate screening of applicants, (4) possible criminality or undesirability of some passport purchasers who might threaten the nation or damage its reputation and existing visa-waiver agreements, (5) the

prostitution of the country's citizenship for the profit of a foreign procurer, (6) the dilution of national identity, and (7) the devaluation of democracy if most voters in the country oppose the arrangement. Income sharing, real economic benefits for the passport-selling country, relative power, and job opportunities for locals are often sources of discord. Relations may be brittle over these issues, and in some cases there may be suspicions that the agency is diverting business to another country that it may represent. There may be pressures within the passport selling country to renegotiate agreements with the foreign professional agency, and opposition parties and international organizations may challenge the legitimacy of the entire foreign professional agency or passport sales concepts. Opposition to how passports are sold may even lead (as in Dominica in February 2017) to mass demonstrations and a riot demanding the government's resignation. A country may exit from any foreign professional agency arrangement and argue that it has its own competence and resources so that it can manage its own passport sales programme domestically.

Sometimes key figures in an opposition party may even threaten to revoke passports and citizenships that have been granted under the foreign professional agency's programme. Often the domestic opposition to foreign professional agency arrangements is fragmented between three fractions: (1) those disagreeing with all passport selling in principle, (2) those merely wanting some amendments to the existing foreign professional agency arrangement, and (3) those wanting to replace the existing foreign professional agency. This may lead to some confusion about where the opposing political forces stand.

In some cases, the incumbent foreign professional agency (or agencies) may be challenged by at least one other foreign professional agency. Competing foreign professional agencies may align themselves with political rivals in the passport selling country, who may question the basis on which the foreign professional agency concession or contract was granted (for example, if the tender was only advertised in the local press rather than in international media). A company that fails to achieve its goal of becoming an authorised foreign professional agency in a country may claim that there was no open tender process and that the victorious rival foreign professional agency or agencies are unprofessional. The loser may allege that its victorious rival(s) created and implemented a poorly designed programme that the loser does not want to market or be in any way associated with. The defeated foreign professional agency stimulates political debates and conflicts within the passport selling country by claiming to be able to rectify the alleged failings of the incumbent foreign professional agency or agencies. There may be accusations within the country that the foreign professional agency is complicit or directly involved in the corrupt enrichment of its political allies (such as assisting or ignoring the illicit diversion of passport revenues into their personal accounts). It may be difficult for an incumbent foreign professional agency to expose or reprimand cheaters if the malefactors are members of the local power elite (such as influential politicians or high-level bureaucrats). An incumbent foreign professional agency attempts to create a political consensus favouring its continued dominance, sometimes by co-opting (potential or actual) powerful political opponents within the country.

Subcultures

Cyprus (since 2011), Antigua and Barbuda (since 2013), Dominica (from 1993 to 2013), and St. Kitts and Nevis (from 1984 to 2006) have operated their passport sales operations most often through *subcultures*. Subcultures are composed of organisations with a substantial and deep presence in these countries themselves (local governments, accounting and trustee companies, lawyers, international banks, and other financial services providers). In the subculture's core is the country's offshore financial centre. The subculture has significant connections with offshore networks around the world and links with a number of governments and transnational regulators. Subcultures seek recognition and approval from other subcultures in eminent offshore financial centres and by the offshore world's most eminent periodical, *Offshore Investment*.

Subcultures frequently disapprove of isolates and berate them for creating unfavourable images in the media concerning economic citizenship and offshore financial centres generally. If an isolate passport sales programme is in a country with an offshore financial centre subculture, there is little integration between the two. In Vanuatu, for example, none of the passport selling organisations is a member of the peak subcultural organisation, the Vanuatu Finance Centre Association (van Fossen, 2015). In a subculture, passport recipients may be anonymous (as in Antigua and Barbuda) and it may not be altogether clear where passport funds are deposited, or why and how much certain subculture members benefit from them. Nevertheless, general accountability and accounting are considerably better in subcultures than in isolates. Unlike the isolate, the subculture has temporal continuity, hierarchical structure, and a relatively complicated division of labour in its governance.

Unlike foreign professional agencies, which may be more narrowly focused on the passport sales programme, subcultures tend to be oriented toward a more varied array of offshore banking, legal, trustee, financial planning, accounting, insurance, and real estate services to which passport sales operations are related. The offshore subculture's members may call on outside consultants for advice, without these outsiders having an enduring privileged role in the country or its offshore community. In this way, Antigua and Barbuda's passport sales programme was created after it sought guidance from Henley & Partners. Firms that have foreign professional agency relationships with other passport issuing countries may also have representative offices in the subculture, without having a privileged foreign professional agency relationship there. Indeed a firm in a subculture with foreign professional agency relationships in other countries may allege that the local subculture's programme is embryonic, obscure, and unnecessarily costly—for example, in Cyprus (Kälin, 2015 pp. 57-59).

Subcultures do not concentrate on fast money so much as they stress the work and perseverance necessary to construct a durable offshore financial centre and passport sales programme. They attempt to master their competitors' successful business models in a complicated field that demands constant research and dedicated efforts for an enterprise's long-term viability. They have special competence to deliver general offshore services and the rewards may be considerable. Cyprus's Interior Minister Socratis Hasikos stated its passport sales programme attracted 3.5 billion euros in foreign investment (4% of GDP) between 2013 and 2016 (Anastasiou, 2017). Antigua and Barbuda's Prime Minister Gaston Browne affirmed that its passport sales programme's contribution to GDP was 14% in 2015 (*Daily Observer*, 2016).

In subcultures, national governmental authorities sell passports principally through licensed agents. These are customarily a cluster of resident trustee corporations, legal and accounting practices, real estate businesses, financial administrators, company registration agents, and company registration firms, with participation from insurance companies and banks. They operate in the country itself but serve foreign customers—even though these local firms may sub-contract to foreign retailers who distribute the passports supplied by the domestic firms and governments.

Expatriates or foreign enterprises may own a minority or majority of the local enterprises involved in passport sales programmes, yet these operations and their resident workers participate in the offshore service providers' local subculture. Every subculture offers important socialisation into rules, laws, techniques, codes, ethics, expectations, and standards of the offshore financial centre. A result is that clients dealing with subcultures (and foreign professional agencies) have more appeal mechanisms than they do with isolates—if they feel that they have been subject to arbitrary or unfair treatment. The subculture often attempts to find solutions to shared problems. The passport sales programme may even be introduced to maintain the loyalty of clients of other parts of the subculture's offshore financial centre. In Cyprus, for example, passports were initially provided concessionally to rich foreign depositors in the country's troubled banks, who had seen some of their money converted into equity in the aftermath of the Global Financial Crisis. Within the subculture there are frequent drawn-out deliberations on the nature and potential of offshore services, creating considerable common understanding of them. The offshore financial centre's legitimating ideas in subcultures are apt to be more complex than in foreign professional agencies

and especially isolates—frequently suggesting a clearer and more elaborate commitment to libertarian capitalist ethics as part of the offshore way of life.

Subcultures are more capable than isolates or agencies of inculcating offshore ideologies throughout the society as a whole and even into the national identity. Legal circles in subcultures may have enormous power over legislation and policy and may often provide lawyers serving in important government positions before, after, and even during the time that they work in the offshore financial centre. Where offshore subcultures grow, there is often little organized domestic opposition to them. People who disagree with offshore operations may be targets for intimidation, retaliation, ostracism, or even expulsion. Because sovereignty is highlighted by offshore subcultures, antipathy to their activities may be seen as insiders' disloyalty or outsiders' illegitimate interference. Paradoxically, subcultures may present selling passports and other offshore services as a defence of sovereignty.

Subcultures are involved in governmental and community activities. The subculture's lawyers assist in writing economic citizenship and other offshore laws and lobby for their passage and implementation. The subculture's companies sponsor, donate, and contribute to local charities. Members may be key figures in local religious organisations. The links between offshore professionals may be loose, or they may be quite formal. A long-established subculture may build an influential network, a relatively unified front to present to outsiders, and a rewarding insiders' marketplace for referrals and offshore commerce favouring the local subculture's members. Subcultures supply a sizeable and coordinated array of offshore sovereignty services. Even though subcultures may display internal competition and even enmity, rarely do their leaders leave them. Subcultures have a high proportion of executives and professionals who are old hands in the offshore business. This subcultural form is more stable than the isolate and foreign professional agency types and the lifespans of the subculture's offshore businesses are generally longer.

Ideally, subcultures allow members to share resources based on trust and cooperation in a community with a long-term local commitment and shared identity. All members are in the same location and have constant interactions, a sense of belonging, and a common emotional experience. The ideal subculture breaks down interorganisational barriers and binds members. Members can outsource some non-core activities to other members who can do them more cheaply and effectively—so that members can build on their strengths and cover their deficiencies. In reality, these subcultures' members may find it difficult to free themselves from blind short-term opportunism (made more acute by the highly individualistic libertarian ideology characteristically found in offshore subcultures). Some members, particularly the larger organisations, may seek to be the core and dominate and peripheralise smaller, weaker members—to make sure that their interests prevail. Furthermore, some domestic members may be allied to or be parts of other (sometimes much larger and more powerful) global organisations outside of the subculture or competing with it—reducing trust, cooperation, and collaboration within the subculture. In short, the subculture's unity may be constantly threatened by contradictions, conflicts, and moves toward fragmentation.

The subculture may be *too local* and inward looking—leading the government to accept a foreign professional agency arrangement to seize foreign opportunities. The foreign professional agency may be seen to offer a superior global strategy, to be more responsive to clients' issues, and to allow the passport country to increase sales in a niche market demanding specialised expertise for the highest levels of success. Foreign professional agencies may also be far more active than subcultures in furthering global trade associations. These trade associations pushed by foreign professional agencies promote the understanding, acceptance, and approval of economic citizenship as well as encouraging symbiotic information sharing, convergent standards of best practice, and mutual self-regulation across passport sales programmes around the world.

The foreign professional agency only takes a niche passport business from an existing subculture. A subculture, however, has a strong tendency toward self-perpetuation. It may reassert its power by deposing a foreign professional agency from its niche, even if the foreign professional agency has done a creditable or superior job—the subculture's members hoping to seize passport sales' profits for themselves.

Conclusion

Each kind of passport sales programme—isolate, foreign professional agency, and subculture (see Table 3)—is an ideal type (Weber, 1922 [1978]). It is distilled from many sources. It is not intended to match all attributes of each case. Instead it suggests analytical form in what otherwise might be a jumble of information. It synthesises a large number of diffuse, separate, more or less present and sometimes missing organisational features—ordered into a unified classification that can be used for analytical purposes. Each type represents family resemblances (Wittgenstein, 1953). That is, each organisational type is a complex network of criss-crossing and overlapping similarities, where it is not necessary for any one feature to be shared by all cases of this type.

Table 3: Types of offshore passport sales institutional organisations.

	Isolate	Foreign Professional Agency	Subculture
Lifespan of Passport Sales Program	Many are short-lived	variable, but can be terminated abruptly if agency links are broken	relatively long
Location within offshore Services Community	Largely outside	indirectly intergrated through the agency	directly intergrated
Range And Internal Integration Of Passport Sales With Other Offshore Services	low	medium	high
Support Networks	low	high but indirect	high and direct
Benefits To Passport Issuing Government	erratic, often windfalls	medium to high	medium to high
Legitimacy (status) Problems	high to extremely high	medium to extremely high	medium to high
Predominant Mode Of Institutional Organisation Of Passport Sales Program By Country Today	Kiribati Marshall Islands Nauru Samoa Tonga Vanuatu	Dominica Grenada Malta St. Kitts and Nevis St. Lucia	Antigua and Barbuda Cyprus

The isolate passport sales programme experiences the highest rate of failure, extinction, exit, and discontinuity. It lacks the structure, routines, social relations, and outside links most likely to lead to success. It does not weather storms well.

The foreign professional agency style of organisation is relatively stable, but an incumbent foreign professional agency may be constantly challenged by rival foreign professional agencies or by a local subculture that would like to remove the foreign professional agency from its privileged position. The foreign professional agency arrangement may be an arena for intense political disputes and conflicts within the passport selling country, even if there is (and sometimes there is not) an initial honeymoon period after a foreign professional agency takes over the passport sales programme.

The subculture has more social connections and experience within the passport selling country than the foreign professional agency is likely to have. Consequently an incumbent foreign professional agency is likely to be challenged by the local subculture for control of passport sales unless the foreign professional agency continues to persuade the local elite that it can better serve their interests. One way to do this is to convince them that it has superior professional expertise

and global reach in this particular niche market of economic citizenship. This means that rival foreign professional agencies and subcultures are all competing to learn more about the economic citizenship business and how to be successful in it. Isolates are increasingly squeezed by competition from foreign professional agency and subcultural programmes to supply economic citizenship services, depriving isolates of important potential revenue sources that they may have enjoyed in the past. The undesirable or unsuccessful experiments of isolates in Pacific island countries provide opportunities for learning. In this way countries and organisations can understand what went wrong and avoid making the same mistakes.

The success of small island countries depends mostly on strategy—responding to cues, adapting, and learning—cleverly dealing with their dilemmas, thinking out for themselves, or borrowing clever strategies or best practices from other island microstates in similar situations. Effective strategic management consists of realistic assessments of their possibilities for profitable relations with their mainland hinterlands. It also depends heavily on the island microstate's organisational style (Baldacchino & Bertram, 2009).

Islands have a variety of highly specialised economic structures and active entrepreneurial development strategies. They are like a small number of distinct species adapting into niche opportunities provided by the global economy. Their own particular economic niche personalities create distinctive institutions, policies, and popular mutual understandings. Historical paths have a significant (but flexible) impact on local economic strategies and on adjustments to external opportunities (Bertram & Poirine, 2007).

Isolate passport sales programmes have been most prevalent in island microstates with MIRAB political economies (emphasising eMIgration, high Remittances, high Aid flows, and a highly developed state Bureaucracy, with subsidy-driven international diplomacy). Tonga, Samoa, the Marshall Islands, Kiribati, and Nauru clearly fit here, with Vanuatu (but also the non-isolate Dominica) being intercalary cases with some significant MIRAB features (Bertram, 2013). The Foreign Professional Agency and Subculture passport sales programmes are in island microstates that have a Small Island Tourism Economy (SITE), within the PROFIT (People, Resources, Overseas Management (diplomacy), FInance, and Transport) cluster. PROFIT/SITE economies and polities such as Antigua and Barbuda, Cyprus, Grenada, Malta, St. Kitts and Nevis, and St. Lucia contrast with the MIRAB isolates by having a much lower reliance on aid and remittances, significantly greater affluence, more active and creative international engagement, additional domestic policy flexibility, and a stronger emphasis on supplying a diversified range of high value services and products for mainland clients, with a far more dynamic private sector (Baldacchino & Bertram, 2009; Bertram, 2006; Oberst & McElroy, 2007).

Isolates appear in Pacific island countries that are relatively remote from American, European, and Asian global markets, compared to the Caribbean and European island countries that have organised their passport sales by foreign professional agencies and subcultures. The isolates (being in Pacific island countries) are literally more isolated from world markets than their Mediterranean and Caribbean competitors in the economic citizenship industry. This may be a significant handicap (McElroy & Lucas, 2014). It means, for example, that Pacific island isolates are less accessible visitor locations. This makes it more difficult in Pacific island isolates to integrate passport sales with the local tourism industry—a symbiotic developmental process that foreign professional agencies and local subcultures facilitate in a number of more accessible passport selling destinations in Caribbean and Mediterranean islands.

Island microstates will generally have limited internal resources; continental countries are their hinterlands or alter egos. The most successful small island countries organise themselves effectively to profit from international relations, which are often more significant than internal conditions. Effective organisation is rewarded, but unsuccessful strategic management patterns are difficult to reverse. These situations have long-term impacts.

The economic citizenship industry provides an important instance where smallness often assists the development of clear, flexible, and adaptive strategic directions for taking advantage of

opportunities offered by a fluid international environment and the rich local resource of sovereignty. Niche players on island microstates are able to obtain very high returns by pioneering services that draw heavily on a local political identity that can be sold for high profits to continental clients in a global market.

References

Anastasiou, A. (2017). Citizenship for sale controversy. *Cyprus Mail*, 5 February.

Antiporda, J., & Canlas, J. (2016). VACC confirms death threats on RCBC's Deguito. *Manila Times*, 18 March.

Baldacchino, G. (2010). Island enclaves. Montréal-Kingston: McGill-Queens University Press.

Baldacchino, G. (2006a). Islands, Island Studies, Island Studies Journal. *Island Studies Journal*, 1(1), 3-18.

Baldacchino, G. (2006b). Managing the hinterland beyond. *Asia Pacific Viewpoint*, 47(1), 45-60. https://doi.org/10.1111/j.1467-8373.2006.00295.x

Baldacchino, G. & Bertram, G. (2009). The beak of the finch. *The Round Table*, 98(401), 141-160. https://doi.org/10.1080/00358530902757867

Bertram, G. (2013). Pacific island economies. In Moshe Rapaport (Ed.) *The Pacific islands* (pp. 325-340). Honolulu: University of Hawaii Press.

Bertram, G. (2006). Introduction: the MIRAB model in the twenty-first century. *Asia Pacific Viewpoint*, 47(1), 1-13. https://doi.org/10.1111/j.1467-8373.2006.00296.x

Bertram, G., & Poirine, B. (2007). Island political economy. In G. Baldacchino (Ed.), *A world of islands: an island studies reader* (pp. 325-373). Charlottetown: University of Prince Edward Island.

Cababallo, M. (2016). PH vows Bangladesh bank funds recovery. *Manila Times*, 5 December.

Canlas, J. (2016) 'Bigger' bosses linked to launder. *Manila Times*, 19 March.

CBS (2017). Passports for sale. *60 Minutes*. 1 January, (New York, Columbia Broadcasting System).

Daily Observer (Antigua & Barbuda) (2016). 15 October.

Drucker, P. (1986). The changed world economy. *Foreign Affairs* 65(2), 3-17. https://doi.org/10.2307/20042687

Ensor, B. & Wall, T. (2016). Tonga's former PM in passport scandal. *Southland Times*, 9 November.

Financial Express (Bangladesh) (2016) Businessman likely brains behind BB heist. 20 March.

Garae, L. (2015). Citizenship sale raises VT610m. *Vanuatu Daily Post*, 30 September.

IMF (2016a). *Dominica*. Washington, DC: International Monetary Fund.

IMF (2016b). *Saint Kitts and Nevis*. Washington, DC: International Monetary Fund.

Joshua, J. (2016) CIIP: where is the money? *Vanuatu Daily Post*, 29 November.

Joshua, J. (2015) Alleged breach of contract. *Vanuatu Daily Post*, 26 December.

Kälin, C.H. (2015). *Global residence and citizenship handbook*. Zurich, Ideos.

Lopez, M. (2016). Bank officer may have known funds were dirty. *Business World* (Manila), 18 March.

Makin, B. (2016). Vanuatu tax haven opens doors. *Islands Business*, April.

Malta Today (2016) Sliema, St. Julian's preferred choices for Malta's new IIP citizens. 17 November.

Marshall Islands Journal (2015). 17 April.

Marshall Islands Journal (2003). 10 October.

Marshall Islands Journal (2002). 21 June.

McCall, G. (1994). Nissology. *Journal of the Pacific Society*, 17(2/3), 1-14.

McElroy, J., & H. Lucas (2014). A note on the significance of geographic location in island studies. *Island Studies Journal*, 9(2), 363-366.

Mogato, M., & Morales, N. (2016). Philippines money laundering body charges bankers for ignoring cyber heist. Reuters, 23 November.

Oberst, A., & McElroy, J. (2007). Contrasting socio-economic and demographic profiles of two, small island, economic species. *Island Studies Journal*, 2(2), 163-176.

OECD (2014). Issues paper on corruption and economic growth. Paris, Organisation of Economic Co-operation and Development.

Pacific Islands Report (2006). 16 November.
Pacnews (2016a). Tonga PM: corrupt passport 'ninjas' still a challenge. 28 July.
Pacnews (2016b). Tonga passport forgery sentencing on Nov 11. 2 November.
Polu, L. (2015). Government rejects opposition claims that Samoa is sold to China. *Talamua*, 19 January.
Punay, E. (2016). RCBC fires bank manager. *Philippine Star*, 23 March.
Ritzer, G. (2004). *The McDonaldization of society*. Thousand Oaks, CA, Pine Forge Press.
RNZI (2016a). War of words in Tonga's parliament over passport scam. 22 August.
RNZI (2016b). Four Tongans jailed for passport fraud. 19 November.
RNZI (2015). Expert spies holes in Samoan investment plan. 21 April.
Ronkainen, J.K. (2011). Mononationals, hyphenationals, and shadow nationals. *Citizenship Studies*, 15(2), 247-263. https://doi.org/10.1080/13621025.2011.549723
Samoa (2014a). Citizenship investment bill. Apia: Legislative Assembly.
Samoa (2014b). Report for the legislative assembly: citizenship investment bill. Apia: Legislative Assembly.
Samoa Observer (2015). 15 January.
Tonga Government Gazette (2001). 18 September.
Tupufia, L. (2016). Govt. cautioned. *Samoa Observer*, 29 June.
US (2015). Samoa investment climate statement. Washington, DC, Department of State.
van Fossen, A. (2015). Law and political economy in Vanuatu's tax haven. *Comparative Law Journal of the South Pacific*, 18, 157-178.
Van Fossen, A. (2012). *Tax havens and sovereignty in the Pacific islands*. St Lucia & Brisbane: University of Queensland Press.
van Fossen, A. (2007). Citizenship for sale. *Commonwealth and Comparative Politics*, 45(2), 138-163. https://doi.org/10.1080/14662040701317477
van Fossen, A. (1999). Globalization, stateless capitalism and the international political economy of Tonga's satellite venture. *Pacific Studies*, 22(2), 1-26.
Vancouver Sun (2001). 7 December.
Vanuatu (2016). Vanuatu citizenship. Retrieved from: https://www.vancitizenship.gov.vu
Vanuatu (2015). *Vanuatu Registry Services Limited v The Government of the Republic of Vanuatu et al.* (2015), Vanuatu Supreme Court, Civil Case 1089.
Wall, T., & Ensor, B. (2016). They come like ninjas. *Waikato Times*, 7 November.
Weber, M. (1922 [1978]). *Economy and society*. Berkeley: University of California Press.
Willie, R. (2015a). CIIP applicants linked to criminal activities. *Vanuatu Daily Post*, 13 May.
Willie, R. (2015b). Honorary citizenship order gazetted. *Vanuatu Daily Post*, 17 May.
Wittgenstein, L. (1953). *Philosophical investigations*. Oxford: Blackwell.

Book reviews

Ulrik Pram Gad (2017) *National identity politics and postcolonial sovereignty games: Greenland, Denmark, and the European Union*, Copenhagen, Museum Tusculanum Press. 152 pp, ISBN: 978-87-635-4502-0, US$29.00.

In 1985, Greenland made history when it became the first territory to leave what was then the European Community (EC; later EU). The forced EC membership had played an important role during Greenland's struggle for home rule, which it acquired in 1979. Greenland has used its position as one of the EU's Overseas Countries and Territories (OCT) to take steps towards independence from Denmark.

In this book, Ulrik Pram Gad provides an insightful account of the 'sovereignty games' that define the relationship between Greenland, Denmark, and the EU in the context of Greenland's pursuit of sovereign statehood. Greenland's anticipated oil riches, minerals, and access to transport routes form an important part of this imagined future and are used as an asset in interactions with third parties. Arguing that the political identities which have been constructed in Greenland and Denmark, and the accompanying narratives that serve to legitimize their present unequal relationship, are set to collide at some point, Gad comes to the conclusion that Denmark has few options if it wants to prolong the existence of the *Rigsfaelleskabet* (the community of the realm, comprising Denmark, Greenland, and the Faroe Islands). He argues that, paradoxically, full commitment to Greenlandic independence could be the most effective strategy to this end.

Gad approaches the role of the EU in Greenland's move towards independence through a study of the constructions and effects of national identity and foreign policy, drawing on discourse analysis, political debates, legislation, and interviews with key informants. Gad himself gained practical insights into EU-Greenland relations when working for the Government of Greenland at the turn of the millennium. The book forms part of a collective research project on *Microstates in the Margins of Europe: Postcolonial Sovereignty Games*, which aims to connect scholarship on postcoloniality, paradiplomacy, and EU studies.

The first part of the book focuses on the relationship between Greenland and Denmark and explores why both allow the community of the realm to exist (for now). Gad shows that while Danish national identity is based on an ideal of a culturally homogenous nation-state and therefore seemingly incompatible with the culturally diverse community of the realm, its self-image as benevolent democratic role model in the world, and a perceived historical responsibility, turn Denmark's relationship with Greenland into an apparently emotional one, devoid of self-interest. Drawing on short illustrative examples, he argues that the continued use of hierarchical family metaphors by Danish politicians serves to legitimize this relationship in Denmark. This is followed by an analysis of Greenlandic postcolonial identity discourse which functions both "as a mirror- and counter-image of the colonial power" and correspondingly envisions an ideal sovereign nation-state in the form of a culturally homogenous entity. Gad suggests that, as the country strives to realize this vision, Greenland's political identity retains a transitional character. The fact that economic self-support has been made a priority over political sovereignty in this process is rendered more complicated given the strong connectedness between Greenlandic political identity and the concept of a welfare state. Gad highlights that it is this particular dynamic that opens up a temporary role for Denmark to support Greenland's movement towards economic self-sufficiency and state sovereignty. Their current unequal relationship is thus explained in both Greenland and Denmark by the idea that Greenland requires support from Denmark in this process. In Gad's words: "the community of the realm must keep disintegrating to be legitimate."

The second part of the book extends its focus, taking into account actors from outside the community of the realm. This includes a useful interpretation of past Danish interventions in Greenland. For example, Gad positions the forced relocation of inhabitants from near the

American air base at Thule to Qaanaaq in 1953, as part of the games played by Denmark aimed at securing sovereignty over Greenland, thus challenging Denmark's altruistic self-image. Not least because of such past experiences, Greenland's home- and later self-rule authorities have worked to increase independence. The relationship with the EU, as Gad cogently outlines, has proven to be of particular significance in this context. He illustrates how Greenland, by letting Denmark 'disappear' from political discourse and diplomatic practice, has been able to practice and prepare for future sovereignty and construct an image of "sovereign equality" with the EU. Anticipated resources thereby allow Greenland to ease its dependence on Denmark and provide for a narrative that places Greenland in a position to demand acceptance of hunting practices that are crucial for Inuit cultural identity (e.g. sealing)—and thus form another important part of Greenlandic identity discourse—from parties interested in these resources. However, Gad stresses that the practical relationship between Greenland, Denmark, and the EU, which has been shaped significantly by individual actors, is much more complicated than Denmark merely providing the 'platform' from which Greenland maintains its EU relations. While Greenland has managed to "photoshop Denmark out" of interactions with the EU when it comes to certain matters, it relies heavily on Danish support in other areas.

Finally, Gad develops six scenarios for the future relationship between Greenland and Denmark. Returning to one of his core arguments, he suggests that perhaps the only option for Denmark to prolong the community of the realm is to fully commit to its end by working jointly with Greenland towards Greenlandic independence. For Greenland, in turn, this set-up may become more acceptable the lower its narrated and real dependence on Denmark is. Before concluding, Gad points briefly to the challenges that the post-Danish character of a sovereign Greenlandic state may face and calls for broader public debate to develop a coherent vision for the future. He notes that different factors, such as a fading of the expectations of a resource boom, could induce a break-down of the carefully balanced relationship between Greenland, Denmark, and the EU. By highlighting another seeming paradox, Gad however emphasizes that the narrative of a future sovereign Greenlandic nation-state rich in extractives may produce (some of) the resources needed to realize formal sovereignty.

This book offers interesting insights into the complexities and tensions that line Greenland's road towards independence. It constitutes an important contribution to the limited scholarship on Greenlandic foreign relations and sheds further light on the postcolonial relationship between Greenland and Denmark. The overall argument is developed in a very clear and concise fashion, in some parts at the expense of further depth. At the same time, this clarity may render the dynamics currently unfolding on the world's largest non-continental island accessible to a wider audience. The book provides sufficient background information to be easily comprehensible for readers not familiar with Greenland and will be of particular interest for scholars interested in questions of sovereignty and postcolonialism, paradiplomacy, micro-states, and EU-OCT relations.

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Marcus Bingenheimer (2017) *Island of Guanyin: Mount Putuo and its gazetteers*, New York, Oxford University Press. 304 pp., ISBN: 978-0190456191. £74.00.

It will be a familiar experience for island studies researchers to read a text dedicated to a particular island and parse it for information that may be relevant from a comparative island perspective. Sometimes, this process is easier than others.

Taken on its own terms, Marcus Bingenheimer's *Island of Guanyin* is an elegant presentation of a monumental scholarly effort focused on a narrow slice of historical literature related to a single island, Mount Putuo, which is located in China's Zhoushan archipelago. Specifically, Bingenheimer (p. 5) undertakes a chronologically, authorially, and sociohistorically comparative reading of 'temple gazetteers' ("a container format that collects texts about a religious site […] and arranges them according to genre") related to Mount Putuo. These gazetteers, dating from between 1361 and 1999, collect prose texts, poems, illustrations, and maps related to Mount Putuo. This corpus represents a rich, multifaceted source of information concerning not just Mount Putuo but also Chinese governmental, military, religious, educational, economic, and touristic trends.

Mount Putuo is first and foremost a sacred site. As Bingenheimer argues:

> A sacred site consists of more than a location and the socio-economic arrangements of its inhabitants. A location becomes a place by the meanings attached to it. These meanings must be encoded in some form of text in order to be remembered and communicated. […] Without its meanings encoded in text, a place is but a point in space, unsighted by humans, uncited and uncitable. The process is dynamic — places keep changing, text is always on the move. What is here called the textualization of a site is the process by which meanings, place, and text change in time, and memories of change again leave their traces in text and landscape. Topographic facts and historical events inspire the production of texts; the texts in turn influence how people perceive a site and what is proper to do there (p. 12).

Landscape and literature thus write each other (pp. 15-16). Mount Putuo's sacredness is grounded in textual sources that were only associated with the island at a later date. The island is but one of numerous places across Asia that came to be regarded as identical to Mount Potalaka, described in an Indian sutra as the dwelling place of the Bodhisattva Avalokitesvara, known in China as Guanyin (p. 2). Guanyin herself came to be located on Mount Putuo (formerly called Meicen) on account of a foundation legend: a ninth-century Japanese monk was stranded on the island and could not leave until he deposited on the island a statue of the Bodhisattva (pp. 80-81). This legend set in motion pilgrimages to Mount Putuo and ultimately the accumulation of the corpus upon which Bingenheimer's study is based. Islands are in many respects ideal sites for pilgrimage, which implies sacred movement to a peripheral place (p. 166). Crucially, Mount Putuo seems to have possessed just the right amount of peripherality, being close to the diplomatic and trade hub of Ningbo and within reasonably easy reach of the major population centres of late imperial China, at least relative to other 'sacred mountains'—especially for the literati who produced the gazetteers (p. 3).

It is thus in part due to its island spatiality, as a convenient (but not *too* convenient) stopping off point for diplomats and destination for pilgrims and curious literati, that Mount Putuo captured the imagination. Yet its location in a strategically important archipelago could also be a drawback: Mount Putuo was time and again regarded as a security risk by the Chinese state, as a haven for pirates and smugglers. In combination with Buddhism's low status relative to the state promotion of Confucianism during much of the period, imperial favour proved inconstant. The island was the site of fierce military battles and was subjected to forced depopulation, maritime isolation, and even the destruction of its temples.

A confluence of circumstances nevertheless ultimately boosted Mount Putuo's prestige: the Chinese education system produced more scholars than there were positions in the state bureaucracy, leading to a large public of highly educated readers with the time and interest to engage in "a wide array of cultural pursuits for pleasure" (p. 21). These literati—who were both the readers and the writers of the texts included in the gazetteers—were interested in Mount Putuo because it was regarded as a sacred site but were not especially interested in the enactment or practice of this sacredness through pilgrimage and religious ritual. Pilgrims and monks, who were so crucial to the development of Mount Putuo's temples and beauty spots as well as the surrounding region's economy, were at times regarded as inconveniences by the literati, who perhaps in the manner of today's elite cultural tourists, looked down upon mass (religious) tourism and the industry that served it (p. 166).

Mount Putuo remains a sacred site in today's China, and pilgrims and other tourists still contribute significantly to the Zhoushan archipelago's economy—even if today, visitors can travel from Ningbo by bus instead of boat, transforming what was once a four-day journey into a three-hour one (p. 175). Gone are the days when Zhoushan's "thousands of islands" (p. 174) defeated imperial cartography and offered protection to pirates.

Bingenheimer convincingly shows that Mount Putuo's geography and texts have been intimately interlinked. Holy sites and scenic spots, locations of miracles and memorable stories phase in and out of Putuo's history and across its rugged landscape. If one cave where Guanyin is said to appear proves insufficient for the island's needs as a tourism hotspot, then a second cave will be anointed sacred, and a third as well. If one Mount Putuo is not enough, then an even smaller nearby island will be designated as within Mount Putuo's sphere of sacredness. Famous sites are relocated or reproduced, and as old glories fade from memory, new ones come to take their place.

Island of Guanyin is a fascinating book. The fact that it is not written with islandness *per se* in mind renders it no less interesting from an island studies perspective. The volume is a welcome addition to the current scarcity of English-language literature on the islands of China, and it adds to the body of work concerning islands as holy sites. Its methodologically robust examination of textual history provides a surprising range of insights. The book's limitations are related to its methodology: the focus on a narrow genre of texts that permits the book's enormous detail and temporal attentiveness prevents Bingenheimer from taking much consideration of more recent developments on Mount Putuo and from undertaking the kind of wider comparative work that could highlight why Mount Putuo is both special and especially illuminating.

These are, however, only limitations in the sense that, when one reads a great book, one may wish the world of it. Like Mount Putuo itself though, Bingenheimer's volume is a perfect world in miniature, a microcosm of movement, islandness, and change. To hope for something grander is to misunderstand its significance on its own scale.

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Tim Simpson (Ed.) (2017). *Tourist utopias: offshore islands, enclave spaces, and mobile imaginaries*. Amsterdam, Amsterdam University Press. 245pp., ISBN: 978-90-8964-847-1. US$115.

Roughly five hundred years since Sir Thomas More wrote his *Utopia,* these authors bring him into the present day, describing "the *spatial production* of contemporary spectacular tourist sites," or tourist utopias, in a world where "to be famous one only need to be a tourist." In the book's schema, these spaces of exception and consumption function "as laboratories for testing novel spatial formats, protocols, flows, mobilities, and subjectivities." Readers of *Island Studies Journal* will be familiar with the comparison of island to laboratory, following on the notion that islands lend themselves, through geographical isolation and psychological remove, to contained experimentation. However, while some of the "offshore islands" of the book's subtitle are real islands (like Dubai's artificial ones), other tourist sites discussed are figuratively offshore rather than literally (such as the "instant cities" of Laos). This speaks to one of the central tensions in island studies (to which of course *ISJ*'s readers will also be attuned): the debate over extending the idea of the island to a general sense of islandness, applying attributes of actual islands to islanded spaces like the garden or the desert. Since this collection exercises a catholic definition of the island, it does not theorize islands sui generis, but it does offer local examples from which we can extrapolate ideas and insights with global ramifications.

Simpson, in his introductory essay, offers a useful review of the theories that inform his idea of a tourist utopia, and then even more usefully codifies his "tourist utopology" for us in digest form. As is the nature of such summary exercises, it needs must ignore certain subtleties such as the domestic tourist who is not accounted for among the "transient workers and nomadic tourists who have no real local stake," but nevertheless establishes a clear and convenient theoretical platform both for thinking through the essays in this volume and for thinking beyond them.

The chapters are organized into three parts—Enclaves, Imaginaries, and Archipelagoes—and are of uneven quality. One by Keller Easterling, "The Zone is on Vacation," is so riddled with mixed metaphors that it renders itself unreadable. For instance, over the course of two paragraphs, the author describes free trade zones as breeding promiscuously, as a warm pool for the latest cocktail of spatial products, as having swallowed the city whole, and as a germ of an epidemic. Easterling is a professor of architecture at Yale, and her figurative language is partly symptomatic of the archi-speak pervasive in that world and partly a reflection of the difficulty of grasping and making visible the inner workings of these zones, which are both abstraction and very real experience.

Conversely, one of the collection's strongest essays, by Benjamin Kidder Hodges, manages to do a number of things well at the same time. It elaborates the idea of the utopic, building on Louis Marin's idea of utopic spatial play, a touchstone text for the whole volume, as applied to video games and tourism in Bulgaria. Hodges is careful to maintain the distance of simile, arguing that game play and tourism resemble each other while avoiding collapsing the virtual and the real into each other. The piece also does some nice things with creative criticism, bringing Hodges's personal experience, in which "research often felt like a kind of tourism," into the discussion.

The other essays concern themselves with questions of how capital is imbricated in tourist experiences in the twenty-first century, progressing through a number of (mostly) Asian case studies (the book is part of Amsterdam University Press's New Mobilities in Asia series) including Singapore's casinos, Abu Dhabi's cultural enclave, Disney's man-made island in Tokyo Bay, and New Zealand seen through the *Lord of the Rings* films. Since the volume's organizing idea is loose, the essays would have benefited from a coda designed to pull their threads together. As it is, the book ends with a single "archipelago" and the very last word goes to an anonymous blogger quoted in that essay.

The spaces of exception described here are generally read as exempt from the usual rules and laws and distinct from state order, but could alternatively be read as extensions of the state which wants to create loopholes for capital and its stakeholders so they can operate free of those controls. Curiously, the book itself is a product of one of these spaces of exception, and not in a tangential, theoretical way, but through direct funding and hospitality. The workshop that spawned the collection was "generously supported by contributions from three prominent local operators in Macau's gaming industry" and was held in the Adelson Advanced Education Center in the Venetian Macau resort, where the authors were totally immersed in "the perfection of the biopolitical tourist enclosure." The eponym is mega-billionaire, mega-casino owner, mega-donor Sheldon Adelson (lately with a heavy hand in U.S. G.O.P. electioneering and underwriter of the proposed relocation of the American embassy in Israel). No doubt "this generosity proved invaluable for the participants' ability to understand the inner workings of Macau's gaming and tourism business," but what does it mean to theorize the tourism industry from the inside? If the Adelson Center runs training programs in hospitality and related industries, then to what extent is the theorization of those industries a useful tool in studying and potentially promoting them? We might think back to Jamaica Kincaid's caustic remarks on Antigua's Hotel Training School, along the lines of how Antiguans can't see the relationship between a history of servitude and training for service. In an increasingly corporate academia, we must ask who our work is in the service of. On the other hand, is there any outside to today's post-industrial tourist economy? Simpson et al. would argue that we're all always already inside it.

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Bénédicte André (2016). *Îléité: perspectives sur le vécu insulaire*. Paris, Pétra. 266pp, ISBN: 978-2847431490. €20.00.

The title of Bénédicte André's book announces its relevance for island studies: approximating the English *islandness*, the French term *îleité* (as opposed to *insularité*) signals an engagement with the lived experience of islands, a study of islands on their own terms through literary representations (thus, the second part of the title reads *literary perspectives on the lived experience of islands*). The three main chapters of André's book set out to explore the textualisation of islandness in three former colonies of France: the former plantation islands of Guadeloupe (part of the Lesser Antilles) and La Réunion (east of Madagascar in the Indian Ocean), today overseas departments and regions of France, and the archipelago of New Caledonia, situated halfway between Papua New Guinea and New Zealand in the South Pacific, a penal colony in the nineteenth century and now a special collectivity of France. André focuses on the work of one author for each of these island spaces: *Morne Câpresse* (2008) by Gisèle Pineau, a Paris-born Guadeloupian who moved to her native island at the age of 23; five novels by Creole author Axel Gauvin from La Réunion (who studied in France); and finally, a set of twenty-one short stories by Claudine Jacques, a French author who moved to New Caledonia as a teenager.

Beyond these case studies, the declared aims of the book are "to introduce island studies to the French scientific community" and to "demonstrate that a dialogue between the former and literary criticism can take place" (my translation here and below), which links *Îléité* to recent studies in the anglophone world like Ian Kinane's *Theorising Literary Islands* (2017) or Ralph Crane and Lisa Fletcher's *Island Genres, Genre Islands* (2017). Accordingly, André's readings of the primary texts are preceded by a long introductory chapter ("Of the decontinentalisation of islands: influences and limits") that offers an overview of recent

developments within island studies and convincingly challenges Pete Hay's contention that fiction and metaphor have no place in the field. For André, the experience of islandness already entails an imaginative dimension that fiction can help to explore. She also creates a dialogue between anglophone island studies and French cultural geography, notably the work of Joël Bonnemaison and his understanding of islandness in terms of geological and historical rupture (rather than isolation). Arguing that island studies and postcolonial studies have common interests in their explorations of identity, liminality, otherness, agency, and power hierarchies, André draws on the writings of theorists such as Homi K. Bhabha, whose notions of hybridity and third space constitute an important background for her book.

Îleité succeeds in introducing the reader to a set of island fictions that have received virtually no attention from the perspective of island studies. André is attentive to the specific processes of (de-)colonisation and creolisation that distinguish these former islands colonies from their counterparts in, say, the British Empire; her analyses of the poetic and narrative strategies that respond to the specific contexts of French decolonisation shed light on the complexity of these texts' negotiation of cultural identity and the islands' relationship to metropolitan France. She also takes into account the differences between the historical and political contexts of Guadeloupe, La Réunion, and New Caledonia. Thus, she thinks about the difficulty of connecting place with ancestry in an island that had no indigenous population before colonisation (La Réunion); accordingly, she relates the "island malaise" in Gauvin's novels to a poetics of distance and incommensurability that resonates with the difficulty of figuring the island as a homeland for its inhabitants. The tension between enclosure and mobility in Pineau's *Morne Câpresse* is read in its relation to two conceptions of islandness as closed and open, and the oscillation between the two modes is seen as symptomatic of the "intranquillity" of a cultural identity that rests on a history of slavery and the shame resulting from it. Finally, the recurrence of the motif of the threshold and different forms of (resounding) silence in the work of Claudine Jacques are discussed in relation to the Nouméa Accord of 1998 and its emphasis on the "common destiny" of Kanaks and white Caledonians. On the eve of the 2018 referendum about the future political status of New Caledonia, André's discussion of the role of epiphanies, "acts of consciousness," and potentiality in the face of what she refers to as a culture of silence and division reveals the political relevance of Jacques's short stories.

Unfortunately, however, the islands themselves are frequently lost along the way. Time and again, André's book struggles to establish the relevance of her analyses for thinking about islandness. As such, the three chapters do not really live up to the promise of a nissological, geocritical, and geopoetic study of literary islands. The author's attempts to connect her readings back to a discussion of islands frequently run the risk of metaphorical abstraction that is not grounded in the text itself. Thus, the various spatial settings she discusses—ghetto, room, convent, canteen, hospital, fair—are all treated as metaphors of islandness in the (near) absence of textual examples where islands are treated *as* islands. The passing references to some aspects of island geography in Chapter 3—such as the threat of flooding, the difficulty of hiding on the island, or the caves traversing it—are among the rare exceptions. This vague and generalising conceptualisation of islands culminates in the questionable association of islands with a specific genre of literature: "[…] could the short story be a postcolonial insular genre *par excellence*?" While André's discussions of issues like food and language are often insightful, many of her analyses would be equally valid in other geographical settings; indeed, the postcolonial status of the geographies she examines seems to be much more relevant as a common denominator than their islandness. The book is thereby in danger of obscuring rather than illuminating its ostensible object of study. Indeed, the conclusion seems to suggest that islands are everything and nothing: "Between opening and enclosure, marginality and norm, history and memory, real and ideal, living the island constitutes a veritable act of funambulation […]."

While *Îléité* deserves credit for being one of few works (another example is Daniel Graziadei's *Insel(n) im Archipel* [2017]) that brings together—at least in the introduction—discussions of islandness in both English and French, it is rather selective in its engagement with discussions of literary islands, especially when these are not directly associated with the field of island studies. The most striking omission is the work of another scholar from La Réunion, Jean-Michel Racault, one of the most influential academics writing on island literature in French (as is Frank Lestringant, equally omitted from André's book). Given the book's postcolonial approach, it is also somewhat surprising that André ignores studies of (post)colonial islands in the anglophone world by critics like Diana Loxley, Rebecca Weaver-Hightower, or Dorothy F. Lane. Further, André's book misses the opportunity of situating its case studies within a broader literary perspective on France and its island territories (one might think of the Martinican author Patrick Chamoiseau or the Tahitian novelist Célestine Hitiura Vaite).

All in all, *Îléité* provides an interesting and eloquent account of the tensions and anxieties connected to the aftermath of French colonialism in three different oceans. Despite some small mistakes (the Ouvéa hostage crisis is dated to 1998 rather than 1988), the book relies on thorough and detailed knowledge of the political and cultural contexts that shaped the primary texts. Its contribution to literary island studies may ultimately be modest, but it is valuable for its exploration of the links between poetics and politics in a set of works that remind us of France's colonial past and neo-colonial present in the global ocean.

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Nicholas Allen, Nick Groom, & Jos Smith (Eds.) (2017). *Coastal works: cultures of the Atlantic edge*. Oxford, Oxford University Press. 292 pp., ISBN: 978-0-19-879515-5. US$80.

The peripheral character of coasts might be why they are also at the margins of cultural analysis. To be sure, while 'The Atlantic' is relatively well-understood, the cultural meanings of British and Irish coasts remain an understudied area of academic inquiry. But in Coastal Works: Cultures of the Atlantic Edge, a group of literary and cultural scholars gather to invigorate the coastal edge as a way of investigating the constant cultural becoming that unfolds between land and sea. They do so, particularly inspired by the scholarship of John R. Gillis, by drawing the Irish and British Archipelago into what in recent years has been labeled 'The Blue Humanities,' or technically speaking 'thalassology': the historical understanding of water and its effects on human society.

After a concise and well-written introduction, the book uses 13 highly interconnected essays to explore the intricate cultural and literary meanings of the British and Irish archipelago. I say 'essays' because, while scholarly research, they are indeed—to varying extents—imaginative and exploratory. The book opens with Nick Groom's remarkable essay on Thoughts of a Project for Draining the Irish Channel from 1722, an anonymous pamphlet that imagines a new Atlantic archipelago without the Irish Sea. While the pamphlet is obviously a thought-experiment, it nonetheless illuminates the sea as a space that is not simply there, not simply given: it can be colonized and territorialized. The book then moves on to Fiona Stafford's engagement with the literary and geographical Solway Firth, through a critical reading of John Ruskin, as an ambiguous border between expansion and inundation, conquest and exchange, England and Scotland. Nicholas Allen explores the writings of Ciaran Carson, Glenn Patterson, and Kevin Barry in order to invoke a coastal perspective on the literary Belfast and the fictional city of Bohane, particularly as they pulsate with formations

and withdrawal of empire. In a similar vein, Andrew Gibson's essay on Norman Nicholsen connects the coast to the question of where England is imagined to end. These intuitions about where England ends and begins then resurface in the essay of John Brannigan: an inquiry into the dualism of myopic English nationalism and island utopia off the Scottish coast in the writings of Louis MacNeice. Daniel Brayton too explores the coastal uncertainty between national solidity and aquatic fluidity, especially in Erskine Childers's classic novel The Riddle of the Sands, followed by Damian Walford Davies's exploration of Ronald Lockley's archipelagic counter-imagination from the perspective of island studies. The book continues with three essays on the scientific coast: Nessa Cronin's essay on Maude Delab who connected the coastal imagination, through naturalist field-work on the island of Valentia, with the emergence of modern European science; Kyriaki Hadjiafxendi's and John Plunkett's examination of the ways in which the peripheral coast of Devon inscribed itself into popular science in Victorian England; and Margaret Cohen's investigation of Zarh Pritchard's early submarine paintings and the ways they connect to the challenge of seeing under water among artists and engineers. In the final two essays, Andrew McNeillie takes inspiration from Tim Robinson to explore his own relation to the Aran Islands and the ways they connect to global history, and Jos Smith continues the focus on the Aran Islands as an exemplary instance of the way in which the archipelago is represented in Archipelago, the journal edited by McNeillie himself. Finally and appropriately, the anthology closes with an epilogue by Gillis.

What is intellectually born from Coastal Works is, in other words, a fascinating sibling of cultural nissology. For how long can you walk along the coast of an island? The answer, of course, is forever. The island is an infinite coast. Indeed, Godfrey Baldacchino has called the 'island' a "nervous duality"—constantly oscillating between, for example, the local and the global, the interior and the exterior, dystopia and utopia, routes and roots. Similarly, the cultural meanings of the coastal in Coastal Works are ambiguously situated between the inward facing and the outward facing. The coast, like the island, is culturally speaking both a rugged closure of land and a constant encounter with the open.

A problem with the book, however—though to varying extents, depending on the particular contribution—is that some of the responses to the coast border on essentialism. The afterword by Gillis is particularly telling. Setting out from Ralph Waldo Emerson's observation that "the point of greatest interest is the place where land and water meet," Gillis notes that "we have never been so conscious of shores as we are today." The reader is then informed that "we like to think of edges as a product of nature" and that "it is the mental construct of the horizon that draws us outward into a time and space of the beyond, where we escape reality, if only for a moment." Well, who is this we on whose behalf Gillis asserts the horizontal pull into an escapist time and space? Perhaps the generalization of a first-person perspective is not so strange in the essay as a style of writing. Maybe it testifies to a certain intellectual lineage that can best be understood as phenomenological, after all a widespread heritage among studies of space and place. Though I am fully aware that the book is disciplinarily rooted in literary and cultural studies—it is not ethnographic—I cannot help but feel analytically uneasy when 'the coast' is associated with a more or less well-defined form of perception.

Nonetheless, Coastal Works is a skillfully crafted collection of essays that converses intricately with the study of islands. In many anthologies, it is often difficult to really maintain a shared intellectual horizon throughout the book, but these authors succeed. The essays mirror each other. They deserve to be read by anyone who feels or remembers feeling in a particular mood when they walk along the coast.

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Gloria Pungetti (Ed.) (2017). *Island landscapes: an expression of European culture*. New York, Routledge. 299 pp., ISBN: 9781472425447. £115 (hardback).

Landscape research is a demanding and multifarious scientific field that best marks its steps ahead and lays out new ground of knowledge and applicability, through concerted and multilayered team efforts, across place, time, and cultural context. In this light, this collective volume comes as a welcome and worthy scholarly achievement, pushing the landscape research frontier further, as concerns island landscapes, in the case of Europe. As stated in the introductory chapter, the volume aims to improve consideration of European island landscapes, as part of Europe's cultural heritage. It does so by describing changes in European island landscapes over time, considering their current conditions and future trends, and acknowledging the broader context of attempts to achieve sustainability while balancing multiple needs and complex priorities. The introduction also professes that the book is not merely a collection of papers: it is the result of a proper endeavor to shape a methodology for researching European island landscapes and seascapes. While it succeeds in staking new territory in many ways, it only partly accomplishes the goals outlined in the introduction.

The book's scope creates a distinctively European arena for scholarly investigation, bringing together island analysis and discussion from a variety of relevant academic fields and disperse locations around Europe, in an interdisciplinary, multicultural probe into four landscape aspects: (1) history, (2) character, (3) identity, and (4) scenarios, planning, and tools. It does so through the ESLAND Project (**E**uropean Culture expressed in i**S**land **LAND**scapes; http://www.eslandproject.eu/), which attempts to outline novel methodological approaches to island landscape research, analyzing the state of the field both methodologically and conceptually, and applying the theory to case studies. The book's organization in four parts, addressing the four landscape aspects, fully reflects the objectives and structure of the ESLAND Project. The ESLAND Project aimed to improve consideration of European island landscapes, as part of Europe's cultural heritage. It focused on the evolution of these landscapes and seascapes and their present conditions, proposing and employing holistic and interdisciplinary methodological approaches and tools towards a common basis of analysis and discussion on island landscape concepts, classifications, and identities. Each part of the book comprises eight contributions putting forth a) key issues, b) research methods and/or tools, and c) their applications to specific case study island landscape contexts (from Iceland to Cyprus, including the British Isles, Italy, Malta, Greece, Estonia, etc). The book's structure succeeds in delivering ESLAND's contributions in a clear-cut, straightforward way, by effectively delineating the four distinct research areas and outcomes of the project. Also, the book includes an impressive selection of images, which are used effectively to underline and highlight the content of the book.

The most valuable contribution of this book is that each part offers useful and sometimes groundbreaking contributions to its fields of enquiry. The chapters cover a broad range of issues and offer fresh perspectives on challenges that have been raised and considered in a variety of other fora. The biggest problem of the book is that it does not do so in an even and equally effective way. While certain chapters are inspirational for their insights and depth of research (such as those on the British Isles), the description and analysis in many of the chapters laying out case study applications is simply disappointing. For instance, the first few chapters of the section on landscape history provide very insightful and nuanced observations, indicating profound landscape knowledge and offering critical and balanced arguments about landscape problems and prospects, situated in the broader context of relevant European landscape aspects and issues. While such chapters may stand as full and proper research articles on their own (usually, those that introduce each part), most do not. Unfortunately, many of the latter read as loose discussions of landscapes, sometimes without even a stated objective, and with weakly defined methodology (if any) and limited bibliographies. Chapters such as 10 and 18 fail to demonstrate the applicability of the book's key concepts, methods, and tools,

both substantially and instrumentally. They do justice neither to the wealth of the landscapes they describe nor to the possibilities and potential for incorporation and application of the book's novel approaches and tools—including the *seascape* and *insularity* parameters—to the specific case studies. This may be due to the fact that this collection presents the products of the ESLAND project.

Another weakness lies in the treatment of the book's basic terms and definitions. Whereas the whole book is underpinned by a conceptualisation of landscapes as expressions of European culture (the subtitle of the book), the concept of *culture* is not clearly defined or theorised (barely a few lines on p. 9). UNESCO conceptualisations of culture dominate in *cultural heritage* definitions. The conceptualisation and definition of *landscape identity* is also problematic (p. 150; a more correct and well-rounded one is provided on p. 161), and it is certainly not the case that there are presently few landscape identity studies reported in literature. Theoretical issues and approaches revolving around *insularity* could profit from a more extensive scholarly literature review, while new word forms ought to be used more carefully (i.e. mind mapping implies a mapping of the mind). Lastly, despite the fact that qualitative data deficiencies hinder proper and holistic landscape interpretation or perception, generally speaking, it is possible to use qualitative scales and measurements for cultural elements, making it possible also, then, to map them. This is currently probably the biggest challenge in landscape characterization—though a very worthy one.

The conclusions competently and comprehensively summarise the accomplishments of this scholarly endeavor, in its proper scope and scale, placing the book in its broader interdisciplinary landscape studies context, and raising appropriately incisive and portentous points pertaining to the challenges and promises of breaking new ground in island landscape research. Nonetheless, these points (including insularity and seascape analysis) were not realised within and across the individual chapters; there is great variability in the depth and extent to which the authors of the 35 chapters deliver the objectives of the book, as set forth in the introduction. All in all, this collective volume represents an earnest effort to point out the difficulties and opportunities of new and older methodological approaches to various issues, aspects, and aims concerning European island landscapes, encompassing seascape and insularity dimensions, with an uneven degree of success.

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