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Policies and mechanisms to address climate-induced migration and displacement in Pacific and Caribbean small island developing states

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Abstract

Purpose – This study aims to assess policies and mechanisms in Caribbean and Pacific small island developing states (SIDS) that address climate-induced migration and displacement. The migration of communities away from vulnerable regions is highly likely to be an adaptation strategy used in low-elevation SIDS, as the impacts of climate change are likely to result in significant loss and damage, threatening their very territorial existence. SIDS must ensure that residents relocate to less vulnerable locations and may need to consider international movement of residents. *Ad hoc* approaches to migration and displacement may result in increased vulnerability of residents, making the development and enforcement of comprehensive national policies that address these issues a necessity.

Design/methodology/approach – Interviews with United Nations Framework Convention on Climate Change (UNFCCC) negotiators for SIDS as well as analysis of secondary data, including Intended Nationally Determined Contributions, are utilized to determine policies and mechanisms in place that focus on climate-induced migration and displacement.

Findings – While climate change is acknowledged as an existential threat, few SIDS have policies or mechanisms in place to guide climate-induced migration and displacement. Potential exists for migration and displacement to be included in policies that integrate disaster risk reduction and climate change adaptation along with national sustainable development plans. Regional bodies are beneficial to providing guidance to SIDS in the development of nationally appropriate frameworks to address climate-induced migration and displacement.

Originality/value – Existing gaps in policies and mechanisms and challenges faced by SIDS in developing strategies to address climate-induced migration and displacement are explored. Best practices and recommendations for strategies for SIDS to address migration and displacement are provided.

Keywords Small island developing states, Climate-induced migration, Loss and damage

Paper type Research paper

1. Introduction

Small island developing states (SIDS) have been identified as being on the frontline of climate change. While the islands vary in physical features and socioeconomic

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characteristics, they all have a similar level of sustainable development and physical exposure which together lead to extreme vulnerability to climate change (UN, 2005; Kelman and West, 2009). Although SIDS are exposed to a number of climate change impacts including higher atmospheric and oceanic temperatures, changing rates of precipitation, increased intensity of extreme events and decreased fresh water availability, sea level rise is arguably the most threatening challenge facing the many low-elevation SIDS whose populations mostly reside in coastal zones (McGranahan *et al.*, 2007; Kelman and West, 2009; IPCC, 2014). In addition to large coastal populations, vulnerable subgroups within these states include the elderly, children, women, impoverished communities, the disabled and rural inhabitants (Hashim and Hashim, 2016). Low levels of development or uneven development, as well as maladaptation, can exacerbate existing vulnerabilities (Nansen Initiative, 2015). As a result, it is important that any policies or mechanisms that are developed do not further disadvantage already vulnerable groups.

Low-elevation SIDS face coastal erosion owing to a number of factors in addition to sea level rise, including more locally determined drivers such as impacts from extreme events and wave energy patterns (Albert *et al.*, 2016). Anthropogenic changes to shorelines such as development practices, shoreline protection measures and land reclamation also affect levels of erosion and in some cases may lead to coastal accretion (Ford, 2011; Albert *et al.*, 2016). However, as projections of sea level rise increase, there is decreased potential for SIDS to retain their current terrestrial territories without significant levels of adaptation measures (Oliver-Smith, 2009). Indeed, sea level rise threatens the very existence of SIDS, as championed by members of the Alliance of Small Island States (AOSIS) with their "1.5°C to Stay Alive" campaign, that highlights the importance of curbing global temperature increases to prevent existential threats to small islands (Benjamin and Thomas, 2016). The permanent loss of land and resultant movement of people are examples of loss and damage impacts of climate change that cannot be avoided (Durand and Huq, 2016).

As sea level rise, along with coastal erosion and more intense extreme events, increasingly affects low-elevation SIDS, it is highly likely that people living in these impacted regions will be significantly impacted, leading to both displaced people, those who have been forced to move, and migrants, people who are driven by special circumstances to move, but do so voluntarily (Nansen Initiative, 2015). While both terms are used throughout this paper, it often difficult to distinguish clearly between migration and displacement (Kolmannskog and Trebbi, 2010). These phenomena are complex and multifaceted, and can include both domestic and international relocation as well as the partial movement of communities. In addition, it is difficult to attribute migration and displacement solely to climate change, as other socioeconomic and cultural factors, such as age, number of children, income and religion, may also influence decisions to migrate, particularly in lesser developed countries such as SIDS that face a host of development challenges (Mortreux and Barnett, 2009). Estimates of the number of migrants and displaced people induced by climate change vary widely and are based on general assessments of risk exposure, rather than on localized study of mobility associated with environmental change (Barnett and Webber, 2010). However, projections of future climate stimulated migration and displacement are helpful in providing a sense of potential scale of the issue, and in drawing attention to the likely movement of SIDS residents. On a global scale, estimates of climate-induced migrants range from 200 million to 1 billion by 2050 (Tacoli, 2009). In a study of Southeast Asian and Pacific islands, Wetzel *et al.* (2012) find that owing to the loss of coastal zones, between 8 and 52 million people would be displaced from their current residences, depending on the rates of sea level rise experienced. It is, therefore, highly likely that migration will be an adaptation strategy used by SIDS.

This study aims to gain an understanding of the current level of planning and oversight of migration and displacement associated with climate change and identify best practices and gaps in the effective management of climate-induced migration and displacement in Pacific and Caribbean SIDS. Through a qualitative content and thematic analysis of Intended Nationally Determined Contributions (INDCs), supplemented by interviews from AOSIS negotiators from these two regions, this paper provides an identification of the frequency of discussion by Caribbean and Pacific states of climate-induced migration and displacement, and analyses the contextualization of how these issues are experienced and addressed in different national contexts. While AOSIS membership spans island members and observers from across the globe, this study focuses on AOSIS members from the Caribbean and Pacific, the two regions with the highest numbers of SIDS.

2. Migration as an adaptation strategy for SIDS

2.1 History, context and impacts of migration and displacement in SIDS

Many SIDS have a long history of migration, and it is part of the heritage of Pacific and Caribbean residents. In the Pacific region, thousands of years of migration impelled by population density changes, conflicts, resource availability and colonialism have led to current patterns of settlement (Corendea, 2016). Pacific islanders also have a long history of migrating to Australia and New Zealand, for both economic and educational advancement. In the Caribbean, movement between islands and to colonial homesteads, both forced and voluntary (largely owing to shifts in labour availability), is part of the complex history of the region (Chamberlain, 2002). More recent migration patterns show movement from Caribbean islands to metropolitan centres in the USA, Canada and the UK, mostly for economic and educational purposes (Connell and Conway, 2000).

Migration and displacement owing to climate-induced events in these states is already taking place, primarily owing to natural disasters, but also owing to slow-onset events such as sea level rise, coastal erosion and salt water intrusion (Corendea, 2016). Displacement owing to disasters, including the adverse impacts of climate change, is likely to be one of the largest humanitarian challenges facing states in the twenty-first century (Nansen Initiative, 2015).

Least developed countries (LDCs) and SIDS face specific challenges with disaster-induced displacement and migration, and their populations are hardest hit globally (Nansen Initiative, 2015). Causes of disaster displacement can include population growth, underdevelopment, weak governance, conflicts and violence, as well as poor urban planning. These circumstances can also undermine the resilience of states and communities, and therefore further exacerbate the impacts of climate change, natural hazards and environmental degradation (UNHR, 2011; Nansen Initiative, 2015). Like other developing countries, SIDS can also face developmental challenges owing to climate-induced events, such as depleted tax bases, declining reserves and credit ratings and diversion of capital from other developmental needs such as education, health and poverty reduction (Lyster, 2015). Significant percentages of GDP can be diverted, and post-disaster activities often force increased borrowing by these states. All of these impacts erode resilience, and exacerbate existing national vulnerabilities.

2.2 Planned migration as an adaptation strategy

The migration of communities away from particularly vulnerable regions has been identified as an adaptation strategy highly likely to be used in SIDS, as they confront loss and damage (Nansen Initiative, 2015). As SIDS face the loss and damage to coastal areas, migration and planned relocation will likely need to be considered as part of comprehensive

adaptation strategies (Betzold, 2015). Pre-emptive movement can be a rational adaption response for SIDS, and can avoid disruption, loss of life and loss of culture (UNHR, 2011). Planned migration, in anticipation of climate change impacts, allows SIDS to relocate on their own terms, in advance of the potential devastation of disasters or of migration processes that may be developed externally and forced upon them (Kelman and West, 2009).

Well-planned and early voluntary resettlement can reduce poverty, diversify and increase incomes and reduce further vulnerability to climate change impacts (Johnson, 2012). Conversely, *ad hoc* approaches to migration may result in increased vulnerability of residents, making the development and enforcement of comprehensive national policies that govern migration and displacement a necessity for SIDS (Albert *et al.*, 2016). Pre-emptive migration can also lead to a greater chance of successful integration for migrants (Farquhar, 2015). Circular or temporary migration can create new livelihoods and opportunities, bring back new technology and skills and also lead to the transfer of cultural and social knowledge (Nansen Initiative, 2015; Corendea, 2016). Well-planned migration can diversify livelihoods and reduce vulnerability through increased income sources for the poor, including through remittances, thereby reducing vulnerability to climate change (Johnson, 2012; Farquhar, 2015).

However, while migration is identified as an advantageous adaptation strategy, land-related cultural practices as well as histories of settlement in outer islands or inland have created traditional socioeconomic and land-related cultural patterns in SIDS which can be significantly affected by migration, possibly leading to social disruption, conflict and even violence (Corendea, 2016). Migration also poses specific and very challenging risks, as it can result in significant economic and non-economic losses to communities, including the loss of ways of life, cultural heritage, biodiversity and a sense of connection to self and communities (Serdeczny *et al.*, 2016). The loss of self-determination and self-reliance can erode traditional values, and threaten the social identity of residents (Fisher, 2012). Additional concerns include exacerbating the depletion of already small human resources, further reducing adaptation capacities and resilience (McAdam, 2011).

2.3 Issues and challenges

There are a variety of perspectives among countries, and at the subnational level, regarding displacement and migration. Many nationals of these countries will simply not want to move. When asked about the possibility of moving to avoid the impacts of climate change, past studies of Pacific islanders have indicated that they did not want to migrate (Corendea, 2012). Similar to residents of many locales, islanders have strong social, cultural and historical ties to their homes and do not take the prospect of permanent migration lightly (Nansen Initiative, 2013).

Community-based migration may assist in smoothing these tensions. The long history of mobility based on clan and kinship networks, particularly in Pacific SIDS, as well as a history of solidarity after disasters, could lead communities to identify the best relocation areas (Nansen Initiative, 2015). Communities could themselves identify suitable locations using criteria such as geographic and environmental suitability, as well as cultural conditions (UNHR, 2011). Many communities may opt to move to land where their families have had, or have, some customary land tenure claims (Albert *et al.*, 2016). For example, in the Solomon Islands, the community-led village relocation in Mararo was an orderly one owing to the collective decision-making of the entire community (Albert *et al.*, 2016).

At the same time, it is important for SIDS that every effort is made to reduce emissions on a global scale in order for migration to be a strategy of last resort. The use of migration as an adaptation strategy should not inhibit continuous focus on the need to mitigate climate

change and prevent catastrophic levels of impacts for SIDS (Mortreux and Barnett, 2009). Significant cuts to emissions on a global scale have the potential to slow the rate of climate change which, when combined with effective and well-resourced adaptation measures, may decrease the need for migration in SIDS (Barnett, 2005). There have historically been some differences between SIDS as to how to approach migration and displacement, with some countries expressing concern that a focus on movement of populations will elide the obligation to reduce emissions among industrial nations (Kolmannskog, 2012). Encouraging migration may also lead donor countries to focus their efforts on providing resources for the movement of people, rather than on other forms of adaptation (Adger and Barnett, 2005).

To facilitate migration as an adaptation strategy, some SIDS have advocated for inclusion of the concept of a "climate refugee" within the international legal structure to prompt international funding and assistance (Farbotko and Lazrus, 2012). However, the existing 1951 Convention Relating to the Status of Refugees requires an element of persecution to qualify as a "refugee". While climate change can exacerbate existing political or economic persecution (Kolmannskog, 2012), without the element of persecution in place, most climate migrants would not qualify for protection under the existing international refugee framework (Miller, 2007). Although human rights obligations, such as the duty to protect, may exist when countries of origin are unable to assist their own nationals (Farquhar, 2015), increased migration is likely to lead to humanitarian crises, and these human rights obligations may not be effective in the long term. Adding to the complexity is the reluctance of many SIDS residents to be relegated to the category of foregone victims (Farbotko and Lazrus, 2012; Fair, 2015). The discourse of "climate refugees" implies a loss of agency of SIDS residents, relegating affected populations as in need of rescue and creating unequal power relationships within the places that these residents may move to (Kempf, 2009; Farbotko and Lazrus, 2012). The contentious discussion of the term "climate refugee" has made this area of study, particularly in relation to SIDS, a complex and sensitive one (UNHR, 2011; Salauddin and Ashikuzzaman, 2011; Pacific Community, 2016). Additionally, the failure of the international community to take responsibility for past injustices, and forced displacement during the colonial era, still echo in vulnerable regions such as SIDS (Corendea, 2016; CARICOM Reparations Commission, 2013).

In the international arena, key questions regarding criteria to determine who would qualify as a climate refugee, what the obligations of receiving countries should be, the rights of these persons and conditions of return or what legal structures and capabilities should be instituted remain unanswered (Sabin Center for Climate Change Law, 2014; Nansen Initiative, 2015). Additionally, some authors have asserted that a universal treaty on climate displacement may be inappropriate, as it cannot cater for the particularities and varieties of displacement and migration that may occur and will encounter difficulties with climate attribution, suffer from lack of political will and be inhibited by difficulties in distinguishing the multi-causal drivers of migration (McAdam, 2011). It is thus important for SIDS to stress their vulnerability in the international arena, but retain their rights to self-determination, sovereignty and agency. As debate continues on the international scale, the development of national policies and mechanisms to address climate-induced migration and displacement is needed to guide the current and future movement of populations.

3. Methodology

Semi-structured interviews with United Nations Framework Convention on Climate Change (UNFCCC) negotiators for member states of AOSIS were conducted between November 2015 and June 2016. Many of the AOSIS negotiators hold senior governmental positions in their respective countries and are aware of domestic policies and actions related to climate

change. Participants were asked to take part in a study focused on investigating the impacts of climate change on migration and displacement of people and policies and mechanisms in place to address loss and damage. Participants were asked scripted questions about existing or potential impacts of climate change on migration patterns and the existence of any institutions or policies in place to facilitate relocation of people owing to loss and damage. Questions were also asked about the inclusion of loss and damage issues in existing national climate change plans or policies. While participants responded with country-specific information, to maintain confidentiality, information was grouped by region, rather than by country.

Interviews were solicited using a snowball sampling approach with AOSIS negotiators. Snowball sampling is recognized as an appropriate methodology for projects focused on particular policy issues or when access to the desired population of relevant actors is limited (Bleich and Pekkanen, 2013). Negotiators from ten member countries of AOSIS whose contact details were made available to the authors were asked to partake in the study and to recommend other negotiators to participate. Of the 39 member states of AOSIS, 32 are within the Pacific and Caribbean regions. Interviews with negotiators from seven of the countries, four from the Caribbean region and three from the Pacific region, were able to be conducted. Negotiators from five additional countries agreed to participate in the project but were unable to successfully arrange a time to be interviewed. Interviews lasted for approximately one hour and took place in-person or via videoconferencing, with the authors typing responses to the scripted questions during the interview. Three of the negotiators opted to receive the scripted questions and send back responses in written form.

In addition to interviews, the INDCs of AOSIS member states were also analysed. INDCs are documents that were submitted to the UNFCCC by Parties in advance of COP 21 in December 2015 (UNFCCC, 2014). These documents detail plans for domestic climate change mitigation to be taken post-2020. Although INDCs were to focus on plans for reduction of greenhouse gas emissions, Parties were also encouraged to include adaptation components, including undertakings in adaptation planning (UNFCCC, 2014). While the format and contents of INDCs were left up to the discretion of individual Parties, guides were developed by third parties to specifically aid LDCs and SIDS in the development of their INDCs (Holdaway *et al.*, 2015). These guides encouraged SIDS to highlight their adaptation needs and efforts as well as support that would be required to facilitate adaptation post-2020.

INDCs were selected to be analysed because of the high profile afforded to them within the UNFCCC. In anticipation of a momentous international climate agreement to be decided upon at COP 21, countries were afforded the opportunity to publicly outline what post-2020 action they would commit to in order to meet the new agreement. The INDCs were highly anticipated and scrutinized to determine whether the country-level actions detailed in the documents would be enough to curb emissions and prevent significant global temperature increases. SIDS were given an opportunity to air their concerns on a global stage through the inclusion of pressing adaptation needs and support required. If migration and displacement were viewed as significant areas of concern for SIDS, mentioning them in some form in the INDC would call attention to these issues.

Of the 31 member states of AOSIS located in the Caribbean and Pacific regions, 28 of the INDCs were analysed, as detailed in Table I. Two of the INDCs (Cuba and Haiti) were not translated to English, which prevented their analysis, and one was not submitted (Timor-Leste). Overall 14 INDCs from the Pacific and 14 INDCs from the Caribbean were analysed.

Using qualitative content analysis, INDCs and transcriptions of the interviews were reviewed to determine any discussion of the following topics:

- past or future climate-induced displacement or migration;
- climate change as an existential threat to SIDS;
- current or future gathering of geospatial, migration or displacement data or studies; and
- formal or informal policies and mechanisms that focus on relocation or that integrate disaster risk reduction with climate change adaptation.

This analysis allowed for identification of the amount of Caribbean and Pacific SIDS that discussed these topics and also for contextualization of how these issues are experienced and addressed in different national contexts.

4. Results

4.1 Current and future climate-induced migration and displacement

Interviewees from both the Pacific and Caribbean generally agreed that migration patterns in the future would be affected by climate change. Flooding, coastal erosion and sea level rise were cited as the probable reasons for residents to relocate. Extreme events were also listed as having the potential to affect the movement of people, with Interviewee #1 from the Caribbean stating, "as more of these severe storms happen, it will affect where people settle; people are seeking high ground". Most respondents thought that climate change-related migration and displacement would first take place internally within countries. Given the lack of agreements with other countries to facilitate international migration, residents of small islands would likely be internally displaced. Interviewee #5 from the Pacific region articulated that future international migration would be difficult to attribute to climate change, given the long history and tradition of economic-related migration to larger Pacific countries.

When asked about existing incidents of migration or displacement owing to loss and damage, all of the Caribbean respondents stated that there are generally calls for relocation of communities following extreme events such as tropical storms or flooding. In this region, interviewees identified a few small, coastal communities that have already been relocated following severe impacts from hurricanes. These communities have generally been moved further inland but in the same vicinity of their prior location. Respondents from the Pacific did not report any relocation of residents owing to environmental reasons but did state that there may need to be movement of residents in the future.

Interviewees from both regions relayed that there has been very limited, if any, consultation with the general public on their preferences for potential or ongoing relocation efforts owing to climate change. Resultantly, there are no national preferences for relocation and little consideration given to where vulnerable populations would like to migrate. For communities that have already been displaced, there have been little, if any, formal studies of the impacts of the move on the residents. While, respondents from both regions said that

Table I. List of INDCs analysed for Pacific and Caribbean AOSIS member states

Region	Countries
Caribbean	Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago
Pacific	Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

there have been some negative impacts on people who have moved from rural to more urban locations, as Interviewee #3 from the Caribbean stated, "you hear stories but there is no data on it".

In the review of INDCs, many of the Pacific SIDS did state that climate change poses a threat to the very existence of their countries. The INDC for Solomon Islands exemplifies this sentiment that was shared by about half of the Pacific AOSIS members:

> For Solomon Islands, as with other small islands developing States and Least Developed Countries, where climate change threatens the very existence of the people and the nation, adaptation is not an option – but rather a matter of survival (Government of Solomon Islands, 2015).

However, while climate change was identified as an existential threat, very few Pacific INDCs directly discussed either current or future migration owing to climate change. A notable exception was Fiji, which indicated that a part of their existing adaptation efforts includes the relocation of communities to higher grounds (Government of Fiji, 2015). While Tuvalu acknowledged the possible need for international migration in the long term, they also stated that they "have a right to pursue any and all means to ensure their nation survives and the legacy remains, with future generations living productive lives on these islands" (Government of Tuvalu, 2015).

A few Caribbean INDCs identified climate change as an existential threat or referred to permanent and irreversible loss and damage, or devastating losses. Many simply highlighted their particular or extreme vulnerability to climate change. Similar to INDCs from Pacific SIDS, very few Caribbean INDCs directly discussed current or future migration or incidences of displacement. The Bahamas mentions relocation of coastline communities but with very few details, and the incidences appear to be *ad hoc* (Government of The Bahamas, 2015). The document notes that 5,000-10,000 people were directly affected by Hurricane Joaquin in 2015, but does not mention how many, if any, of those affected migrated or relocated as a result. Hurricane Erika in 2015 left over 500 people in Dominica homeless, but the INDC does not mention relocation efforts nationally post-event (Government of the Commonwealth of Dominica, 2015). Suriname is notable in this regard, as its INDC acknowledges that on the basis of current models, irreversible losses will necessitate "climate departure" by 2028. They refer to the possibility of relocation as follows: "Suriname's dilemma is whether to continue to invest heavily in adaptation or relocate and rebuild its entire economy away from the threat of rising sea level" (Government of the Republic of Suriname, 2015).

4.2 Existing or planned policies and mechanisms for migration and displacement

Although movement of residents owing to climate-induced events was acknowledged by Caribbean respondents, interviewees intimated that these incidents have generally been dealt with on a case-by-case basis. None of the interviewees, in either region, was aware of any national policies that govern relocation or the inclusion of relocation issues in any other existing policies. Respondents stated that migration in the context of loss and damage owing to climate change was a relatively new issue, and that policy development would likely be guided by the outcomes of the UNFCCC Paris Agreement.

In the review of INDCs, two Pacific countries, Kiribati and Fiji, indicated some level of either formal or informal relocation policies. Of the two, Kiribati appears to have the most detailed mechanism in place for international migration. The Kiribati National Framework for Climate Change and Climate Change Adaptation, developed in 2013, includes a section devoted to population and resettlement (Government of the Republic of Kiribati, 2015). The

framework is aimed at establishing agreements with other countries to facilitate the "inevitable migration of the population, due to climate change as and when this eventually arrives" (Government of the Republic of Kiribati, 2015). Conversely, Fiji is more focused on internal migration and mentions that the "relocation of communities to higher grounds are part of ongoing adaptation initiatives" (Government of Fiji, 2015).

Apart from Suriname's mention of the possibility of future migration, only Belize in the Caribbean region mentions specific policies catered to migration or relocation. Its INDC notes that its future strategy is to:

> [...] promote the adoption of an integrated land tenure and land classification policy and developing and implementing programmes which discourage the establishment of human settlements in areas prone to natural hazards (flooding, land slippages, high winds and storm surges), and develop housing and settlement patterns/practices that enhance climate change adaptation and are resilient to climate change (Government of Belize, 2015).

Guyana is working on a Climate Resilience Strategy and Action Plan for adaptation and resilience building, but it is unclear whether this will include migration or relocation policies (Government of Guyana, 2015). Dominica has developed a Climate Risk Assessment framework which seeks to develop priority risk areas based on a sectoral risk analysis (Government of the Commonwealth of Dominica, 2015). The country acknowledges that prior practices using inadequate planning tools have led to maladaptation through rebuilding in active wave inundation and flood- and landslide-prone areas.

The review of INDCs also revealed limited existing management of migration and displacement owing to climate-induced events in the Pacific. Here again, Fiji was an exception and detailed that as vulnerability assessments are completed for communities, capacity building is provided for those where relocation is identified as the most appropriate strategy to adapt to climate change impacts (Government of Fiji, 2015). The Caribbean region reflects similar outcomes, where INDCs in these countries made limited reference to management of migration and displacement. The Saint Lucian INDC does mention vulnerability priority area mapping as part of its Climate Change Adaptation Policy 2015, but says little about relocation on the basis of that mapping (Government of Saint Lucia, 2015).

While there are limited policies and mechanisms focused on migration in the Pacific, 11 of the Pacific SIDS referenced either existing or plans for policies that integrate disaster risk reduction with climate change adaptation. Several of these integrated policies are time-specific and are undergoing updates for new time frames. Cook Island's Joint National Disaster Risk Management and Climate Change Adaptation Plan (JNAP) provided a five-year timeframe from 2011-2015 and is undergoing updates to extend action to 2020 (Government of Cook Islands, 2015). Other Pacific INDCs mention existing JNAP and activities that are being taken to update these plans for new time frames (Government of the Federated States of Micronesia, 2015; Government of the Republic of Kiribati, 2015; Government of the Marshall Islands, 2015; Government of Niue, 2015; Government of the Kingdom of Tonga, 2015; Government of Tuvalu, 2015). In addition to the development of a JNAP, Marshall Islands also incorporates disaster risk management and climate change adaptation into its National Strategic Development Plan: Vision 2018 (Government of the Marshall Islands, 2015). The three-year rolling plan will be continuously updated as the country makes progress towards achieving its sustainable development goals.

Conversely, very few Caribbean INDCs mention specifically integrated climate change adaptation and disaster risk reduction policies. They usually do reference some type of climate change adaptation policy, sustainable energy policy, low-carbon development plan and/or a national development plan as well as possibly an integrated coastal zone

management plan or policy. There appear to be only sectoral approaches to integrating these two issues, particularly in tourism. For example, Barbados mentions a regional monitoring system for disaster risk management and climate change adaptation in the Caribbean tourism sector (Government of Barbados, 2015). Jamaica and St. Lucia are exceptions to this norm. As a result of a Government of Jamaica, EU and UNEP project on climate change adaptation and disaster risk reduction, Jamaica's national Climate Change Policy Framework integrates both adaptation and disaster risk reduction (Government of Jamaica, 2015). St. Lucia has an integrated disaster risk management programme which prioritizes climate change and disaster resilience, although fiscal deficits and debt have meant only *ad hoc* budget allocations can be made to these initiatives (Government of Saint Lucia, 2015). Many INDCs in the region do, however, acknowledge the need for a cross-sectional and integrated approach to climate change, even if they have not managed to achieve it at a policy level (Government of the Commonwealth of Dominica, 2015; Government of St. Vincent and the Grenadines, 2015). A few of these countries have developed mechanisms instead of policies to attempt to mainstream and integrate climate change, such as the Climate Change Focal Point Networks in both Trinidad and Tobago and Jamaica, where regular reporting and climate risk screening tools are used by both government ministries and departments as well as sub-national entities such as NGOs, academia and the private sector (Government of Jamaica, 2015; Government of Trinidad and Tobago, 2015).

In terms of collection of geospatial, migration and displacement data or studies, several countries know the type of data they need to collect, but lack the financial resources to do so. In St. Vincent and the Grenadines, the Pilot Programme for Climate Resilience anticipates the preparation of comprehensive hazard maps, including telemetric weather stations, coastal zone impacts modelling and a harmonized platform for data analysis and management, but it requires funding to implement (Government of St. Vincent and the Grenadines, 2015). Similarly, Solomon Islands plans to support community-based vulnerability mapping and adaptation planning but requires direct access to financing to do so (Government of Solomon Islands, 2015).

However, despite the calls for access to funding, some SIDS have made initial efforts at gathering geospatial data. Antigua and Barbuda is developing a Sustainable Island Resource Management and Zoning Plan for a national spatial development framework from 2012-2032 (Government of Antigua and Barbuda, 2015). Dominica has begun a programme of vulnerable mapping of their national parks as well as community-based vulnerability mapping, supplemented by community surveys (Government of the Commonwealth of Dominica, 2015). Grenada has begun detailed mapping of coastal features as well as a vulnerability assessment of water resources (Government of Grenada, 2015), and Suriname has begun preliminary vulnerability assessments (Government of the Republic of Suriname, 2015).

5. Discussion

5.1 Lack of policies or data

Despite limited knowledge of interviewees and partial inclusion in INDCs, the literature reveals that SIDS in both the Pacific and Caribbean are already beginning to take action at the community scale to relocate vulnerable populations internally owing to impacts associated with climate change. Many of these recent relocations have taken place only after an extreme event with significant levels of damage (UNHR, 2011). For example, in 2014, the Fijian Government decided to relocate the Vunidogoloa village owing to sea level rise and flooding at high tide after sizeable portions of the settlement were destroyed owing to

coastal erosion, increased flooding, seawater inundation and impacts from cyclones (SPC, 2015; Corendea, 2016). In 2016, following Cyclone Winston, 3,000 people were relocated from nine coastal villages on Ovalau in Lomaiviti in Fiji (Bolatagici, 2016). Displacement is already occurring in Vanuatu, where communities affected by coastal flooding, as well as those near vulnerable river banks and flood plains, have been asked to relocate (Talakai, 2015). Islanders in Kiribati are also moving from outer islands which have become uninhabitable owing to erosion, salt-water intrusion or drought (Nansen Initiative, 2015). In St. Lucia, approximately 150 homes in Soufriere had to be relocated owing to landslides following Hurricane Lenny in 2000 (Anthony, 2000).

While displacement and migration owing to environmental change in SIDS is already taking place, interviewees intimated a lack of studies that have been conducted to capture best practices and lessons learned from these movements. Petz (2013) also found that there is a paucity of studies that analyse the short- and long-term implications of moving persons to new locations. However, to develop comprehensive frameworks to address climate-induced migration and displacement, SIDS should also take into consideration their past experiences with these issues. Learning from these past experiences will aid in developing locally sensitive, culturally appropriate and evidence-based migration and displacement plans. SIDS should also take into account the desires of the public to facilitate public buy-in (UNHCR, 2011). Including stakeholder-based priorities within national frameworks also strengthens the position of countries when engaging with development partners (Campbell and Warrick, 2014).

Although climate change is stressed as being an existential threat in many of the INDCs of AOSIS countries, climate-induced migration and displacement has not yet been elevated to an issue of significant policy concern for many SIDS. The general trend found from interviews and INDCs is that few countries have formal, implemented migration or displacement policies. Due in part to the lack of policies that would provide guidance, Caribbean interviewees intimated that movement of people and communities may be driven by the government or they may come from calls from the communities themselves or the general public. The *ad hoc* approach to migration and displacement may play a factor in the limited knowledge of interviewees and partial inclusion in INDCs about movements of populations that are already taking place in response to climate-induced events.

This finding is supported by the literature that finds that incidents of migration and displacement in SIDS have largely taken place on an unplanned and responsive basis (Petz, 2013). In countries where migration and displacement have already occurred, no official plans or policies on internal migration owing to climate change have been instituted (Pacific Community, 2016). In terms of policy choices for relocation, owing to their small land masses, SIDS may struggle to identify appropriate land to relocate communities, particularly where strong clan and kinship networks, as well as cultural ties to land, persist (Nansen Initiative, 2015).

This lack of national policies on migration and displacement contributes to the *ad hoc* approach to movement and may also result in maladaptation. Poorly designed relocation and post-disaster activities can further exacerbate vulnerabilities and increase risk and exposure to communities, leading to maladaptation (Kolmannskog and Trebbi, 2010). For example, in the Solomon Islands, the lack of systematic planning for the relocation of families from the Nuantambu village led to fragmentation of the small, insular community and placement of some families in vulnerable locations (Albert *et al.*, 2016). However, examples of maladaptation are rarely acknowledged, perhaps owing to governments being reluctant to highlight failed policy implementation. It is likely, however, that without formal policies, criteria or guidance, further instances of maladaptation may occur.

The lack of national policies may be affected by the need for localized, scaled geospatial data in these countries, which makes it difficult to identify the most vulnerable locations and therefore to inform migration and displacement policies. Alternatively, or perhaps additionally, where such data are available, the data may not be appropriately collated, analysed or managed to provide a coherent picture of vulnerable areas. While there are many accounts of displacement in SIDS owing to slow onset and extreme events, it has been acknowledged that the lack of systematic and ongoing data collection on displaced persons and the impacts of their relocation has led to insufficient measures to plan for migration or to provide services for already displaced people (UNHR, 2011).

The current unplanned approach to migration and displacement becomes inadequate in an era of climate change (Ferris *et al.*, 2011). As the intensity of extreme events increases, so too will damages, likely resulting in more instances of displacement (Wetzel *et al.*, 2012). Impacts of sea level rise and coastal erosion are highly likely to increasingly affect residents, interacting with other socioeconomic stressors and increasing migration push factors. Issues such as population growth, land tenure and limited land availability may also prevent the current strategy of relocating communities to nearby inland locations from being utilized in the future.

5.2 Emerging trends: integrating plans and policies

While the majority of SIDS analysed in this study do not have existing policies related to migration and displacement, those countries that do, have included these issues in policies focused on national development or on climate change adaptation and disaster risk reduction. Including migration and displacement in these types of policies may be the best option, as migration and displacement are inherently linked to issues of development and environmental change (Petz, 2013; Campbell and Warrick, 2014). Small public sectors in many of these SIDS also mean that there is a need for policy coherence and coordination (SPREP, 2013). To facilitate policy coherence and address the issue of migration both as an adaptation strategy for climate change and as a mechanism to reduce risk to extreme events, migration and displacement should ideally be dealt with within integrated disaster risk reduction and climate change adaptation policies that are linked to national development (McAdam, 2014; Platform on Disaster Displacement, 2016; Roberts and Pelling, 2016). As countries begin to develop or update these integrated policies, it would be beneficial to include consideration of migration and displacement. More concrete steps can also include deeper upskilling of populations, land audits, demarcation of unclear boundaries, country-level mapping, implementing dual nationality laws, ratifying and implementing human rights instruments, instigating rational dialogues on migration and displacement as well as planned relocation and developing normative frameworks based on past practices and regional experiences (Nansen Initiative, 2015). Policies such as these would provide countries with the flexibility, policy space and public buy-in to implement policies on migration and displacement. Vulnerability mapping would further inform the public discourse, and provide crucial data to policymakers to inform decisions, and help these vulnerable states appropriately allocate resources, and make the difficult policy choices regarding migration and displacement that lie ahead.

SIDS in the Pacific have made significant strides in the development of integrated disaster risk reduction and climate change adaptation policies. This is likely owing to the focus by the Secretariat of the Pacific Community in encouraging this direction of policy development as well as funding available through Official Development Assistance and climate change financing (SPREP, 2013). Technical and financial support from regional intergovernmental agencies and development partners along with the establishment of

formalized governance arrangements have aided in the development and implementation of these integrated policies in Pacific SIDS. However, the development of integrated policies is not a panacea. Challenges such as limited human resources, lack of prioritization by national governments and issues with policy incoherence have affected the successful implementation of some of these policies (SPREP, 2013). Nevertheless, developing informed frameworks to address these pressing issues is a necessary step in climate change adaptation, and Caribbean SIDS can learn from the experiences of their Pacific counterparts.

A few SIDS are also already making plans to facilitate planned international migration. Both Kiribati and Tuvalu have focused on family migration pathways with neighbouring countries such as Australia and New Zealand, and increasing education and labour skills as a form of relocation policy (McAdam, 2011). However, Kiribati is currently the only country with a plan for staged, international migration. Under the principle of "Migration with Dignity", Kiribati purchased land in Fiji for agricultural purposes and to secure land rights for possible migration (Corendea, 2016). On a regional scale, the Pacific Climate Change and Migration project was launched with the aims of developing targeted national and regional policies on climate-induced migration and increasing labour mobility opportunities for Pacific Islanders (UNESCAP, 2014).

All SIDS can benefit from the experiences of the few countries that have begun to develop strategies to facilitate planned international migration. The strides made by Kiribati and Tuvalu in planning for migration to nearby Pacific countries is a strategy that can be pursued by other SIDS. However, as many individual SIDS have limited access to international migration mechanisms (Campbell and Warrick, 2014), it may be beneficial to develop regional approaches to migration to facilitate international agreements. Efforts to develop a regional legal framework to address climate-induced migration in the Pacific have been initiated by the Pacific Islands Forum Secretariat and the United Nations Economic and Social Commission for Asia and the Pacific (Corendea, 2017). Plans to migrate internationally must take into account the need for climate-induced migrants to retain a sense of agency and culture, and not be viewed as a burden on accepting countries.

6. Conclusion

The analysis of climate-induced migration and displacement literature and review of INDCs as supplemented by interviews have exposed significant gaps in policies and mechanisms to address these issues in Caribbean and Pacific SIDS. Despite the enormity of existing and potential future losses, like other developing countries, very few SIDS have clear criteria or guidance to determine when planned migration is necessary, or how such relocation should be implemented (UNHR, 2011; Nansen Initiative, 2015; Albert *et al.*, 2016). The need to consider future climate-induced migration and displacement was not mentioned in the vast majority of INDCs from SIDs, although this was a platform to showcase adaptation needs post-2020. Despite past experiences with displacement owing to environmental change, and acknowledgement by the majority of negotiators that climate change will affect migration patterns within their countries, climate-induced migration is not at the forefront of issues that are highlighted by SIDS.

This study also shows that there has been more advancement in addressing climate-induced migration and displacement by SIDS in the Pacific as compared to Caribbean SIDS. This supports other studies that have found that Pacific SIDS have a number of national initiatives focused on upskilling for migration with dignity, land audits and mapping to identify vulnerable communities, pursuing a policy of dual nationality and the integration of climate change adaptation with disaster risk reduction plans (Corendea, 2016). This appears to be linked to robust regional bodies for Pacific SIDS that have provided guidance on the

issue, and to a strong belief and practice in developing regional solutions to common issues (Pacific Islands Forum Secretariat, 2014). For example, the recently adopted Framework for Resilient Development in the Pacific 2017-2030 advocates for the adoption of integrated approaches for managing climate change and disaster risks in its member countries to make more efficient use of scarce resources, and to rationalize multiple funding sources and mainstream risks (Pacific Community, 2016). It models itself as becoming a pioneer for other regions and the world in this area. Specific policy actions cited in the Framework include collecting and sharing data on loss and damage and integrating human mobility where appropriate through national policies, including relocation and labour migration policies. The Framework advises Pacific islands to "anticipate and prepare for future displacement by integrating human mobility issues with disaster preparedness, response and recovery programmes and actions" (Pacific Community, 2016). It may be beneficial for Caribbean regional bodies as well as SIDS in other regions to learn from their Pacific counterparts and support the process of addressing issues of migration and displacement in regional and national policies.

SIDS should consider developing more coherent displacement and migration policies that are informed by nationally scaled data. However, given this recommendation, it is acknowledged that the collection of these data is already a recognized capacity gap in many of these countries. Collection and analysis of this type of national data is an expensive endeavour. As a result, SIDS should be aided financially in the collection, analysis and sharing of these data. This should become a priority for multilateral development banks and donor agencies such as the Green Climate Fund and Global Environmental Facility through country-driven projects. Nationals of these countries should be involved in these projects to ensure that the data are nationally appropriate, includes local communicates, and are made available to policymakers and decision-makers as well as researchers and local communities. Traditional knowledge should be integrated into such projects to appropriately apply national policies at a local level (Flores-Palacious, 2015). For example, a project in The Cook Islands in 2015 focused on upskilling seniors, promoting climate change adaptation and capturing local and traditional knowledge on climate change impacts through the distribution of tablets in Manihiki (Adaptation Fund & UNDP, 2015). Seeking out co-benefits such as these in data collection projects aims to achieve a number of important development objectives, and can similarly increase resilience of these communities. The accumulation of appropriate data can allow these states to start to make the difficult policy decisions that lay ahead, including on displacement and migration policy formation. It will also assist them in preventing maladaptation such as rebuilding in already vulnerable areas, or moving residents to new but equally vulnerable areas.

While developing policies and mechanisms for climate-induced migration and displacement is much needed, it is also acknowledged that this is an extremely sensitive and complex issue. It involves both high economic costs, as well as issues of national sovereignty, cultural identity and a sense of place. These sensitivities are further exacerbated by the knowledge that SIDS have contributed little to the problem of climate change, and so issues of equity and climate justice abound. SIDS may also have to contend with residents who do not wish to move, owing to strong social, cultural and historical ties to their homes, which may result in social conflict (Nansen Initiative, 2015), as well as lack of appropriate domestic land masses to move to. It is not surprising that given the potential negative political implications of such as sensitive issue, that it has not been widely discussed within these vulnerable states.

It is also important for SIDS to be aware of and try to prevent exacerbating existing vulnerabilities through the development of displacement and migration policies.

Migration often benefits the most advantaged in a society, and can intensify existing vulnerabilities of communities (UNGA, 2009). Deep and wide consultation with communities in these countries is therefore a necessary ingredient in the development of policies that must be gender-sensitive, participatory, equitable and transparent (Kalin, 2015). It is important, therefore, that existing vulnerabilities and the perspectives of residents are captured in any future policies or actions to deal with migration and displacement.

Despite these complexities and sensitivities, there is a need for these vulnerable states to integrate human mobility into national plans and policies, as well as to collect and disseminate data on migration and displacement to better understand vulnerabilities and to design appropriate and durable solutions (Swing, 2015). As SIDS address the issue of loss and damage in the global arena and confront climate-induced migration and displacement, these vulnerable states must develop and implement national approaches to plan and organize movement of residents. While there is much work to be done in the development of migration and displacement policies and mechanisms, the advances made by some SIDS and regional bodies provide a way forward in addressing this complex issue.

References

Adaptation Fund & UNDP (2015), "Rauti para project, Manihiki report", available at: www.ws.undp.org/content/samoa/en/home/library/environment_energy/rauti-para-project-manihiki-may-2015.html (accessed 1 March 2017).

Adger, N. and Barnett, J. (2005), "Compensation for climate change must meet needs", *Nature*, Vol. 436 No. 7049, pp. 328-328.

Albert, S., Leon, J.X., Grinham, A.R., Church, J.A., Gibbes, B.R. and Woodroffe, C.D. (2016), "Interactions between sea-level rise and wave exposure on reef island dynamics in the Solomon Islands", *Environmental Research Letters*, Vol. 11 No. 5, p. 054011.

Anthony, K.D. (2000), *Strengthening Modernizing and Repositioning the Economy*, Unpublished manuscript, Honourable Prime Minister and Minister of Finance and Economic Affairs of St. Lucia, Speech, St. Lucia.

Barnett, J. (2005), "Titanic states? Impacts and responses to climate change in the Pacific Islands", *Journal of International Affairs*, Vol. 59 No. 1, pp. 203-219.

Barnett, J. and Webber, M. (2010), "Accommodating migration to promote adaptation to climate change", Policy Research Working Paper 5270, The World Bank, Washington, DC.

Benjamin, L. and Thomas, A. (2016), "1.50C to stay alive? AOSIS and the long term temperature goal in the Paris Agreement", *IUCNAEL E-Journal*, Vol. 7, pp. 122-129.

Betzold, C. (2015), "Adapting to climate change in small island developing states", *Climatic Change*, Vol. 133 No. 3, pp. 481-489.

Bleich, E. and Pekkanen, R. (2013), "How to report interview data. Interview research in political science", in Mosley, L. (Ed.), *Interview Research in Political Science*, Cornell University Press, Ithaca, New York, NY, pp. 84-105.

Bolatagici, L. (2016), "Nine coastal villages in Fiji to relocate due to cyclone", *Fiji Times*, 20 April, pp. 1-1.

Campbell, J. and Warrick, O. (2014), *Climate Change and Migration Issues in the Pacific*, United Nations Economic and Social Commission for Asia.

CARICOM Reparations Commission (2013), "10-Point Reparations Plan", available at: http://caricomreparations.org/caricom/caricoms-10-point-reparation-plan/ (accessed 10 March 2017).

Chamberlain, M. (2002), *Caribbean Migration: Globalized Identities*, Routledge, London.

Connell, J. and Conway, D. (2000), "Migration and remittances in island microstates: a comparative perspective on the South Pacific and the Caribbean", *International Journal of Urban and Regional Research*, Vol. 24 No. 1, pp. 52-78.

Corendea, C. (2016), "Development implications of climate change and migration in the Pacific", Climate Law and Governance Working Paper Series No 3/2016, McGill University, Montreal.

Corendea, C. (2017), "Pacific countries advance regional policy towards migration and climate change", available at: http://theconversation.com/pacific-countries-advance-regional-policy-towards-migration-and-climate-change-70632 (accessed 21 May 2017).

Corendea, C.I. (2012), *Human Security in the Pacific: The Climate Refugees of the Sinking Islands*, Golden Gate University School of Law, San Francisco, CA.

Durand, A. and Huq, S. (2016), *Defining Loss and Damage: Key Challenges and Considerations for Developing an Operational Definition*, International Centre for Climate Change and Development.

Fair, H. (2015), "Not drowning but fighting: Pacific islands activists", *Forced Migration Review*, Vol. 49, pp. 58-59.

Farbotko, C. and Lazrus, H. (2012), "The first climate refugees? Contesting global narratives of climate change in Tuvalu", *Global Environmental Change*, Vol. 22 No. 2, pp. 382-390.

Farquhar, H. (2015), "Migration with dignity: towards a New Zealand response to climate change displacement in the pacific", *University of Wellington Law Review*, Vol. 49, pp. 29-45.

Ferris, E., Cernea, M. and Petz, D. (2011), *On the Front Line of Climate Change and Displacement: Learning from and with Pacific Island Countries*, The Brookings Institution-London School of Economics Project on Internal Displacement, Washington, DC.

Fisher, B.P. (2012), "Climate change and human security in Tuvalu", *Global Change, Peace and Security*, Vol. 23 No. 2, pp. 292-313.

Flores-Palacious, X. (2015), "Samoa: local knowledge, climate change and population movements", *Forced Migration Review*, Vol. 49, pp. 59-61.

Ford, M. (2011), "Shoreline changes on an urban atoll in the central Pacific Ocean: Majuro Atoll, Marshall Islands", *Journal of Coastal Research*, Vol. 28 No. 1, pp. 11-22.

Government of Antigua and Barbuda (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Barbados (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Belize (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Commonwealth of Dominica (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Cook Islands (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Federated States of Micronesia (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Fiji (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Grenada (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Guyana (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Jamaica (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Kingdom of Tonga (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Marshall Islands (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Niue (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Republic of Kiribati (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of the Republic of Suriname (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Saint Lucia (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Solomon Islands (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of St. Vincent and the Grenadines (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of The Bahamas (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Trinidad and Tobago (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Government of Tuvalu (2015), *Intended Nationally Determined Contribution*, UNFCCC.

Hashim, J. and Hashim, Z. (2016), "Climate change, extreme weather events, and human health implications: the Asia Pacific region", *Global Environmental Change*, Vol. 28 No. 2, pp. 8S-14S.

Holdaway, E., Dodwell, C., Sura, K. and Picot, H. (2015), "A guide to INDCs", 2nd ed., available at: https://cdkn.org/wp-content/uploads/2015/04/CDKN-Guide-to-INDCs-Revised-May2015.pdf (accessed 22 May 2017).

Intergovernmental Panel on Climate Change (IPCC) (2014), *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC, Geneva.

Johnson, C.A. (2012), "Governing climate displacement: the ethics and politics of human resettlement", *Environmental Politics*, Vol. 21 No. 2, pp. 308-328.

Kalin, W. (2015), "The Nansen initiative: building consensus on displacement in disaster contexts", *Forced Migration Review*, Vol. 49, pp. 5-8.

Kelman, I. and West, J.J. (2009), "Climate change and small island developing states: a critical review", *Ecological and Environmental Anthropology*, Vol. 5 No. 1, pp. 1-16.

Kempf, W. (2009), "A sea of environmental refugees? Oceania in an age of climate change", in Hermann, E., Klenke, K. and Dickhardt, M., (Eds), *Form, Macht, Differenz: Motive und Felder ethnologischen Forschens*, Universitätsverlag Göttingen, Göttingen, pp. 191-205.

Kolmannskog, V. (2012), "Climate change, environmental displacement and international law", *Journal of International Development*, Vol. 24 No. 8, pp. 1071-1081.

Kolmannskog, V. and Trebbi, L. (2010), "Climate change, natural disasters and displacement: a multi-track approach to filling the protection gaps", *International Review of Red Cross*, Vol. 92 No. 879, pp. 718-729.

Lyster, R. (2015), "A fossil fuel-funded climate disaster response fund under the Warsaw international mechanism for loss and damage associated with climate change", *Transnational Environmental Law*, Vol. 4 No. 1, pp. 125-151.

McAdam, J. (2011), "Swimming against the tide: why a climate change displacement treaty is not the answer", *International Journal Refugee Law*, Vol. 23 No. 1, pp. 2-26.

McAdam, J. (2014), "Creating new norms on climate change, natural disasters and displacement: international developments", *Refugee*, Vol. 29 No. 2, pp. 11-26.

McGranahan, G., Balk, D. and Anderson, B. (2007), "The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones", *Environment and Urbanization*, Vol. 19 No. 1, pp. 17-37.

Miller, I. (2007), "There's no place like home: human displacement and climate change", *Australian International Law Journal*, Vol. 14, pp. 71-85.

Mortreux, C. and Barnett, J. (2009), "Climate change, migration and adaptation in Funafuti, Tuvalu", *Global Environmental Change*, Vol. 19 No. 1, pp. 105-112.

Nansen Initiative (2015), *Disaster-Induced Cross-Border Displacement Volume 1*, Nansen Initiative.

Nansen Initiative (2013), *Human Mobility, Natural Disasters and Climate Change in the Pacific: Outcome Report from Nansen Initiative on Disaster-Induced Cross-Border Displacement Pacific Regional Consultation*, Nansen Initiative.

Oliver-Smith, A. (2009), "Sea level rise and the vulnerability of coastal peoples: responding to the local challenges of global climate change in the 21st century" No. 7/2009, United Nations University Institute for Environment and Human Security, Bonn.

Pacific Community (2016), "Framework for resilient development in the Pacific: an integrated approach to address loss and damage, 2017-2030. Voluntary guidance for the Pacific Island Region," available at: www.forumsec.org/resources/uploads/embeds/file/Annex%201%20-%20Framework%20for%20Resilient%20Development%20in%20the%20Pacific.pdf (accessed 1 March 2017).

Pacific Islands Forum Secretariat (2014), *The Framework for Pacific Regionalism*, Pacific Islands Forum Secretariat, available at: www.forumsec.org/resources/uploads/embeds/file/Framework%20for%20Pacific%20Regionalism_booklet.pdf (accessed 1 March 2017).

Petz, D. (2013), *Neglected Displacement: Human Mobility in Pacific Disaster Risk Management and Climate Change Adaptation Mechanisms*, International Displacement Monitoring Centre/ Norwegian Refugee Council, Geneva.

Platform on Disaster Displacement (2016), "Strategic Framework 2016-2019. Follow up from Nansen Initiative Protection Agenda", available at: http://disasterdisplacement.org/wp-content/uploads/2016/10/02062016-PDD-Strategic-Framework-FINAL.pdf (accessed 1 March 2017).

Roberts, E. and Pelling, M. (2016), "Climate change-related loss and damage: translating the global policy agenda for national policy processes", Climate and Development, 1-15.

Sabin Center for Climate Change Law (2014), "Climate change and forced displacement: calling for an international dialogue on the legal rights of persons displaced by climate change and corresponding obligations of national governments", available at: http://wordpress.ei.columbia.edu/climate-change-law/files/2016/10/climate_change_and_forced_displacement.pdf (accessed 1 March 2017).

Salauddin, M. and Ashikuzzaman, M. (2011), "Nature and extent of population displacement due to climate change-triggered disasters in the south-western coastal region of Bangladesh", *Management of Environmental Quality*, Vol. 22 No. 5, pp. 620-631.

Secretariat of the Pacific Regional Environment Programmer (SPREP) (2013), *JNAP Development and Implementation in the Pacific: Experiences, Lessons and Way Forward*, SPREP, Samoa.

Serdeczny, O., Waters, E. and Chan, S. (2016), "Non-economic loss and damage in the context of climate change: understanding the challenges", *Discussion Paper 3/2016*, Deutsches Institut für Entwicklungspolitik GmbH, Bonn.

Swing, W.L. (2015), "An integrated focus", *Forced Migration Review*, Vol. 49, pp. 15-53.

Tacoli, C. (2009), "Crisis or adaptation? Migration and climate change in a context of high mobility", *Environment and Urbanization*, Vol. 21 No. 2, pp. 513-525.

Talakai, M. (2015), "Loss & damage gap analysis from climate change", Vanuatu Country Report, available at: www.nab.vu/sites/default/files/nab/projects/final-gap_analysis_on_loss_and_damage_from_climate_change-vanuatu_report.pdf (accessed 1 March 2017).

United Nations (UN) (2005), *Mauritius strategy for the further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*, Document A/CONF.207/CRP.7., United Nations, Port Louis.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) (2014), "Pacific climate change and migration project brochure", available at: www.unescap.org/resources/climate-change-and-migration-issues-pacific (accessed 1 March 2017).

UNFCCC (2014), *Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013, Addendum. Part two: Action taken by the Conference of the Parties at its nineteenth session, UNFCCC, Bonn.*

UNGA (2009), "Annual report of the UN high commissioner for human rights and report of the office of the high commission and the secretary general. A/HRC/10/61", available at: www.ohchr.org/Documents/Press/AnalyticalStudy.pdf (accessed 1 March 2017).

UNHCR (2011), "Summary of deliberations, climate change and displacement: identifying gaps and responses", *Bellagio Expert Meeting on Climate Change and Displacement*, available at: www.unhcr.org/4da2b5e19.html (accessed April 2011).

United Nations Human Rights (UNHR) (2011), *Protecting the Human Rights of Internally Displaced Persons in Natural Disasters: Challenges in the Pacific*, United Nations Human Rights Regional Office for the Pacific.

Wetzel, F.T., Kissling, W.D., Beissmann, H. and Penn, D.J. (2012), "Future climate change driven sea-level rise: secondary consequences from human displacement for island biodiversity", *Global Change Biology*, Vol. 18 No. 9, pp. 2707-2719.

Further reading

Secretariat of the Pacific Community (SPC), SPREEP, UNISDE, UNDP, Pacific Island Forum Secretariat, University of South Pacific, EU, CCA, ACP (2015), "Compendium of case studies on climate and disaster resilient development in the pacific", available at: www.pacificdisaster.net/pdnadmin/data/original/case_studies_pacific.pdf (accessed 1 March 2017).

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