



**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

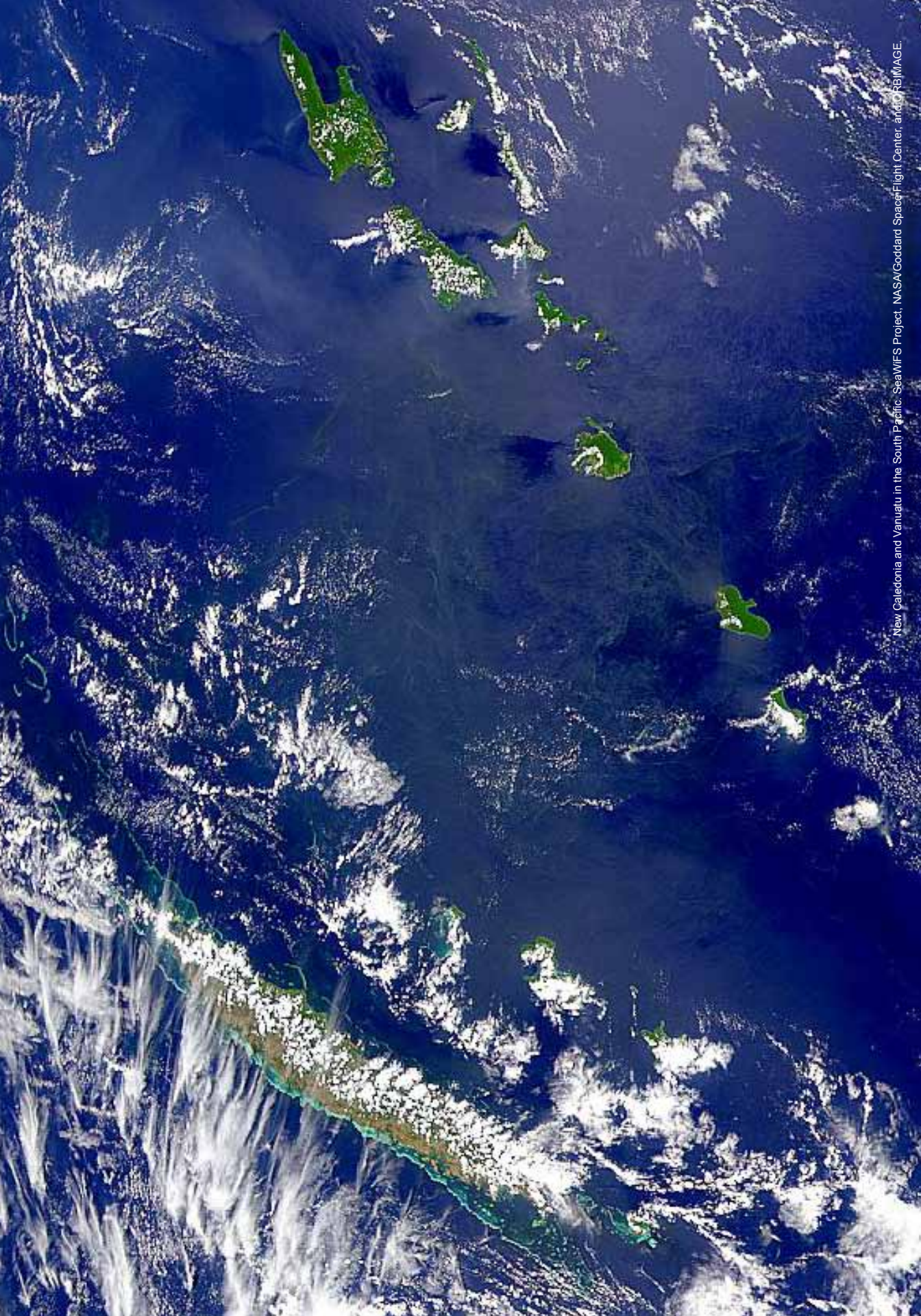
September 2011

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New Caledonia and Vanuatu in the South Pacific. SeaWiFS Project, NASA/Goddard Space Flight Center, and ORBIMAGE.



BROOKINGS

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## ACRONYMS

<b>CMP</b>	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
<b>COP</b>	Conference of the Parties
<b>GDP</b>	Gross Domestic Product
<b>IOM</b>	International Organization for Migration
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>LSE</b>	London School of Economics
<b>NGO</b>	Non-governmental Organization
<b>OCHA</b>	Office for the Coordination of Humanitarian Affairs
<b>OHCHR</b>	Office of the High Commissioner for Human Rights
<b>PCC</b>	Pacific Conference of Churches
<b>RAPs</b>	Resettlement Action Plans
<b>UN</b>	United Nations
<b>UNHCR</b>	Office of the United Nations High Commissioner for Refugees
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change

## ACKNOWLEDGEMENTS

The “Regional Workshop on Internal Displacement Caused by Natural Disasters and Climate Change in the Pacific” was held in Suva, Fiji from 4-6 May 2011 as a joint initiative of the Brookings-LSE Project on Internal Displacement, the Regional Office for the Pacific of the Office of the High Commissioner for Human Rights (OHCHR) and the Sub-Regional Office for the Pacific of the Office for the Coordination of Humanitarian Affairs (OCHA). The workshop brought together representatives of governments, international organizations and civil society from seven Pacific countries—Fiji, Kiribati, Papua New Guinea, Samoa, Solomon Islands, Tuvalu and Vanuatu—to examine and reflect on the implications of natural disasters and climate change in the region. We are grateful to the UN for its collaborative spirit in organizing the workshop and for the background documents prepared by their offices; for the past few years we have found ourselves relying on and promoting the protection tools developed by the UN Humanitarian Team in the Pacific. Once again, we were impressed with the creativity and commitment of UN staff in the region. We also express appreciation to the Secretariat of the Pacific Islands Forum for graciously hosting the meeting. Most of all, we are grateful to the participants from Pacific Islands countries for sharing their experiences and concerns with us. Some of the participants told harrowing stories of running away from tsunamis and of rising sea levels. Some shared indigenous knowledge of warning signs of disasters. Some brought DVDs so that other participants could see what life is like on their islands. All spoke from their own experiences of living on islands in the Pacific Ocean at a time when the effects of climate change are being felt. All were concerned about what would happen to their families, communities and countries in the future.

While we have published a synthesis report of the proceeding of the workshop together with our UN colleagues, we also wanted to put together a publication which highlights the substantive issues of the workshop while referencing some of the research which has been done on these issues. The views and opinions expressed in this paper are solely those of the authors and may not necessarily express the views of agencies participating in the workshop. We are grateful to Faye Hipsman for providing additional research support to this paper. We hope that this report will provide some insights and serve as a wake-up call to recognize the particular needs of Pacific Islanders who are on the front lines of climate change.





# 1. THE QUEST FOR KNOWLEDGE ON CLIMATE CHANGE

The Pacific Island countries are internationally regarded as a barometer for the early impacts of climate change. Their geophysical characteristics, demographic patterns and location in the Pacific Ocean make them particularly vulnerable to the effects of global warming.<sup>1</sup> Small Island Developing States, a UN-established category which includes most Pacific Island countries, are characterized by a high ratio of shoreline to land, low elevation, settlement patterns concentrated in coastal areas and a narrow economic basis—all of which put them at heightened risk. Perhaps more than in any other region, the populations and governments of Pacific Island countries are keenly aware that they face severe and multifaceted risks as a result of climate change. Their lives and livelihoods are linked to the Pacific Ocean; rising sea levels and other effects of global warming threaten not only their physical assets and coastal zones, but also their way of life and perhaps their national identities.

*“For us Pacific peoples, the discussion on climate change is not just a theoretical issue that we talk about when we come to these global meetings! It is there and we see the effects in our daily lives. For us it is a matter of life and death! In many cases we have to decide whether to stay on our islands or leave our homes.”*

—**Fiu Mataese Elisara**, Executive Director, O le Siosiomaga Society, Samoa

(Presentation at the International Expert Group Meeting on Indigenous Peoples and Climate Change, Darwin, Australia, April 2-4, 2008)

In the Pacific Islands, this acute awareness of the potential impact of climate change comes not only from books and studies, but from first-hand knowledge and ongoing experiences with the effects of the world’s changing climate. The value and relevance of these experiences are not confined to the Pacific Islands, but are relevant for the world at large.

This paper aims to conceptualize and distill some dimensions of these experiences, in light of the discussions and presentations made at the *‘Regional Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific’* (May 2011) organized by the Brookings-LSE Project on Internal Displacement in conjunction with the

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<sup>1</sup> Ilan Kelman, “Hearing local voices from Small Island Developing States for climate change,” *Local Environment*, 15: 7, p. 606.; See also: Intergovernmental Panel on Climate Change, *IPCC Fourth Assessment Report: Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability, Chapter 16: Small Island States, Executive Summary*, 2007, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg2/en/ch16s16-es.html](http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch16s16-es.html)

UN Humanitarian team in the Pacific. The synthesis report on the workshop's proceedings contains additional information in support of the issues outlined and examined in this paper.<sup>2</sup>

The paper begins by stressing the importance of knowledge on how to react to climate change causes and effects, while warning of the risks of superficial speculation. It then succinctly examines some of the negative effects of climate change on Pacific Island countries, followed by a summary of some of the predictions in terms of migration and displacement by 2050. The bulk of the paper is devoted to the issue of population movements and dislocation compelled by climate change, particularly spontaneous migration, forced displacement, and voluntary or involuntary resettlement. Further emphasis is placed on the vast repository of relevant knowledge contained in today's scholarship about development-forced displacement and resettlement (DFDR). This paper argues that this repository is underutilized and that it must be exploited intensively as part of the quest for relevant knowledge to support informed practical actions. The experience of past displacement in the Pacific Islands is further tapped in connection with the emerging—but likely premature and over-emphasized—issue of de-territorialization.

The paper ends with a set of recommendations distilled by the findings and debates of the workshop and the Brookings-LSE Project's research in the area, around which the authors would invite further contributions and discussion from both inside and outside the Pacific Islands region.<sup>3</sup>

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<sup>2</sup> See Brookings-LSE Project on Internal Displacement, UN OCHA, OHCHR, *Regional Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific*, Suva, Fiji, May 4-6 2011, Synthesis Report, June 2011, [www.brookings.edu/events/2011/0506\\_idp\\_fiji\\_workshop.aspx](http://www.brookings.edu/events/2011/0506_idp_fiji_workshop.aspx)

<sup>3</sup> Comments and rejoinders may be sent to [idp@brookings.edu](mailto:idp@brookings.edu)

## 2. WHEN RISK-RESPONSIBILITY IS MISPLACED

Although it is expected to suffer disproportionately from the effects of climate change, the Pacific region is responsible for only an estimated 0.006% of the total global greenhouse gas emissions.<sup>4</sup> From the beginning of global awareness about climate change, Pacific Island governments have urged developed countries to reduce their emissions to mitigate the effects of climate change. Most fundamentally, of course, mitigation efforts are a justice issue: small island states face serious consequences of policies and practices of developed countries. Until recently, there was reluctance by those expected to be most affected by climate change to seriously pursue discussion of adaptation strategies. To do so was perceived as accepting the inevitability of continued greenhouse gas emissions and thereby letting the emitters ‘off the hook.’

Pacific Island leaders continue to press for global recognition of the urgency of the situation. In July 2011 Marcus Stephen, president of Nauru, made a plea for the United Nations Security Council to recognize that climate change is as great a threat to international peace and security as nuclear proliferation or global terrorism:

“Negotiations to reduce emissions should remain the primary forum for reaching an international agreement. We are not asking for blue helmets to intervene; we are simply asking the international community to plan for the biggest environmental and humanitarian challenge of our time.”<sup>5</sup>

Similarly, Anote Tong, President of the Republic of Kiribati at the occasion of the Opening Ceremony of the High Level Segment of the COP 16/CMP6 in Cancun in 2010, underlined the urgency of actions to mitigate the effects of climate change for the world:

“... as an international community we cannot continue with business as usual, we must work together to respond and act with responsibility; we must listen, take heed of what is happening in these most vulnerable states in the frontline and act accordingly, act with urgency...what is happening in these frontline states concerns all of us...it must be taken as an early

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<sup>4</sup> Pacific Conference of Churches, “Statement of the Pacific Conference of Churches on Climate Change and Resettlement”, 22 May 2011, <http://climatepasifika.blogspot.com/2011/05/statement-of-pacific-conference-of.html>

<sup>5</sup> Marcus Stephen, “On Nauru, a Sinking Feeling”, The New York Times, 18 July 2011, <http://www.nytimes.com/2011/07/19/opinion/19stephen.html>



warning to the international community and a precursor for what could ultimately be the fate of humanity if further action is delayed.”<sup>6</sup>

While making the case that Pacific governments must develop strategies to adapt to the effects of climate change, Bettencourt, et al. in a World Bank paper explain that there is another dynamic which may inhibit attention to disaster risk reduction measures:

For many Pacific Island governments, it is a rational decision not to reduce risks as long as donors respond generously to disasters, whether or not preventive efforts have been taken. The benefits of prevention may not become visible for years, and may unfavorably compete with other short-term domestic priorities. Donors face strong public pressure to respond rapidly to disasters and often mobilize funds outside their normal budgets for this, whereas funding of preventive action is often constrained.<sup>7</sup>

While recognizing that this dynamic makes it more difficult for Pacific governments to champion adaptation policies, the authors conclude that “[t]he traditional approach of ‘wait and mitigate’ is a far worse strategy than proactively managing risks. There is no benefit in waiting to see if global warming will affect the region. Natural hazards already take an annual toll that destroys valuable property, threatens and takes lives and disrupts national economies. Any additional disasters arising from climate change will only make matters worse.”<sup>8</sup>

At this time, the scientifically documented risks of global warming are such that both mitigation and adaptation measures must become higher priorities for the world at large than they are now. Those responsible for causing these risks must intensify their efforts to reduce greenhouse gas emissions. Governments and civil society in the Pacific must continue their strong advocacy for mitigation measures, even while planning for the consequences of climate change. To do otherwise is irresponsible.

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<sup>6</sup> Anote Tong, President of the Republic of Kiribati, Statement at the occasion of the Opening Ceremony of the High Level Segment of the COP 16, Cancun, 8 December 2010.

<sup>7</sup> Sofia Bettencourt, Richard Croad, Paul Freeman, John Hay, Roger Jones, Peter King, Padma Lal, Alan Mearns, Geoff Miller, Idah Pswarayi-Riddihough, Al Simpson, Nakibae Teuatabo, Ulric Trotz, Maarten Van Aalst, *Not if but when: Adapting to Natural Disasters in the Pacific Islands Region: A Policy Note*, the World Bank, 2006, p. viii.

<sup>8</sup> Bettencourt et al, p. ix.

### 3. NATURAL DISASTERS AND PACIFIC ISLANDS: A KNOWLEDGE-SUPPLYING SOURCE

The record is stark. For centuries, the Pacific Islands have been the victims of natural disasters which occur here with relatively higher frequencies and proportionally more daunting effects than in most other regions of the world. Sudden-onset disasters—such as cyclones, earthquakes, tsunamis, volcanic eruptions and flooding—have been and remain frequent, feared and deadly. The number of sudden-onset disasters has increased significantly since 1950, the severity of hurricane-strength cyclones has grown, and the total population affected per event has been increasing—the result of population growth, rapid urbanization and environmental degradation.<sup>9</sup>

But the Pacific region does not only experience the effects of sudden-onset disasters, but also slow-onset disasters—such as droughts, riverine erosion, coral bleaching and increasing salination of its soils and water, often aggravated by human-caused environmental damage and industrial development.

Climate change is likely to exacerbate both sudden-onset and slow-onset disasters. This is why Pacific Island countries are justifiably regarded as being on the “front line” of the effects of climate change, and therefore in need of international attention and assistance.

Yet at the same time and in light of their experience, the Pacific Islands ought to be regarded and treated not just as a victimized, vulnerable and “aid-recipient area,” i.e. an area that needs to *receive* support from the international community, but also as a key “knowledge-supplying area,” i.e. an area that is able to *offer* information and valuable knowledge germane to the climate change concerns of the international community worldwide. Pacific people, specialized researchers and governmental decision-makers all have key and critical roles to play both in urging the international community to take measures to mitigate the effects of climate change and in developing proactive adaptation plans to respond to climate change. Their experiences in the immediate past and the present provide a repository of experience which contains lessons for other parts of the world.

Yet one fact is worth urgent attention: the experiences of Pacific Islands to date have been stoically endured yet have received inadequate attention from academic researchers. In recent years strong advocacy by Pacific Islanders has led to a rise in scientific interest

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<sup>9</sup> Bettencourt, et al, p. 5. Also see Mark Pelling and Juha I. Uitto, “Small island developing states: natural disaster vulnerability and global change,” *Environmental Hazards* 3 (2001) 49-62.

in some of the effects of climate change on the region, but many areas remain underexplored.<sup>10</sup> Therefore, systematic social and economic research should be initiated and oriented towards observing, promoting and proactively learning about human mitigatory and adaptive responses and options in the region. It is incumbent on far-sighted policy-makers and planners to rank—and finance—such research as one key element of efforts to tackle the adverse climatic consequences of global warming.

Given the fact that catastrophic climate events are likely to increase in severity and frequency in the future, more will be required of all actors in the region. Pacific Island governments should develop and strengthen legislative and policy frameworks to prepare for and respond to disasters and climate change. International organizations should continue their positive approach of supporting governments while strengthening community-based initiatives. Civil society organizations, such as churches and environmental groups, play a key role in raising awareness of the issues and mobilizing both community and government action.

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<sup>10</sup> For examples of recent research see, Columbia Law School, “Consolidated notes from: Threatened Island Nations, Legal Implications of Rising Seas and a Changing Climate”, May 23-25 May 2011. See also Jane McAdam (ed.), *Climate Change and Displacement, Multidisciplinary Perspectives*, 2010. See also Susin Park, *Climate Change and the Risk of Statelessness: The Situation of “Sinking Island States”*, UNHCR, Division of International Protection, PPLAS/2010/01, January 2011. See also Jon Barnett and John Campbell, *Power, Knowledge and the South Pacific*, 2010.

## 4. DISTRESS CIRCUMSTANCES: A TEST-TIME FOR RESPECT TO HUMAN RIGHTS

During the regional workshop in Fiji, participants examined and reflected on the implications of natural disasters on the political and social climate of the region. The meeting focused particularly on the impact of natural disasters and climate change on the people in the Pacific, the risks of their displacement, and on their human rights. As the workshop's detailed report clearly states,<sup>11</sup> natural disasters do not just destroy buildings and reshape topography—they also test and affect the ability of people to exercise their basic rights. They also affect governance patterns as well. Distress circumstances are precisely the time when defending and respecting people's human rights is not only morally imperative but is also essential to finding effective solutions.

The Fiji workshop succeeded in drawing attention to the complex linkages between human rights, climate change, natural disasters, migration and involuntary population resettlement. But it also pointed to the insufficiency of social science research able to serve as guidance about which future approaches should be developed. Crucial questions remain: How do individuals decide when to leave their communities and what role do environmental factors play in those decisions? How have migration and resettlement served as adaptation strategies for communities facing prior environmental and development-caused changes? What are the negative and positive long-term effects of previous efforts to resettle communities to different islands? What is the interaction between traditional and formal authorities in preparing for and responding to disasters? What happens over the long-term to people who are displaced by tsunamis and cyclones? What happens to those who cannot return to their original communities? What happens to their communities?

In places such as the Carteret Islands of Papua New Guinea and Vanuatu, many of these questions are especially relevant and harrowing, given that people are already experiencing the effects of climate change. Understanding the ways in which communities and governments can themselves prepare for, respond to and recover from natural disasters and develop strong adaptation plans is essential not only for these and other Pacific Islanders but for communities in other parts of the world who face—or will face—similar challenges.

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<sup>11</sup> See Brookings-LSE Project on Internal Displacement, UN OCHA, OHCHR, *Regional Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific, Suva, Fiji, May 4-6 2011, Synthesis Report*, June 2011, [www.brookings.edu/events/2011/0506\\_idp\\_fiji\\_workshop.aspx](http://www.brookings.edu/events/2011/0506_idp_fiji_workshop.aspx)





***“The sea determines our life.  
The coral reef is the rainforest of the sea.”***

—Pastor Sanaila Bici, Tuvalu

## 5. A SUCCINCT LOOK AT GEOGRAPHY AND STATISTICS



The Pacific Islands are made up of 22 countries and territories with a population of approximately 9.2 million people and consist of around 7,500 islands of which 300 are inhabited, spreading over an area of 30 million km<sup>2</sup>. But figures for the region as a whole obscure its variation: Papua New Guinea has close to 7 million people and a large land mass which is more than the rest of the Pacific islands combined.<sup>12</sup> Nearly all of the Pacific Island countries fall under the UN's category of Small Island Developing States.<sup>13</sup>

In terms of its physical and human geography, the region is commonly classified into three geo-cultural sub-regions: Melanesia, Micronesia and Polynesia. Melanesia comprises large, mountainous and mainly volcanic island countries, while Micronesia and Polynesia are made up of much smaller island landmasses; they mostly contain small atolls with poor soils, with elevations usually between one and two meters (Kiribati, Marshall Islands, Tokelau and Tuvalu) as well as some islands of volcanic origin with more fertile lands (such as Samoa, Tonga, the Federated States of Micronesia, Cook Islands). Some countries (e.g. Nauru) only consist of one island while others (e.g. Papua New Guinea, Fiji) are composed of hundreds of islands.<sup>14</sup> Moreover, in some cases such as the Cook Islands and American Samoa, the islands have less than complete national sovereignty. Although only comprising 0.1 percent of the world's population, about one-third of the world's languages are spoken in the region. Melanesia has about 1,000 spoken languages while Polynesia and Micronesia are more linguistically homogenous.<sup>15</sup> It

<sup>12</sup> Ilan Kelman, "Hearing local voices from Small Island Developing States for climate change," *Local Environment*, 15: 7, p. 613.

<sup>13</sup> UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, List of Small Island Developing States, [www.un.org/special-rep/ohrls/sid/list.htm](http://www.un.org/special-rep/ohrls/sid/list.htm). Only New Zealand, Fiji and the Federated States of Micronesia are not included in the UN's listing of Small Island Developing States.

<sup>14</sup> Gerald Haberkorn, "Pacific Islands' Population and Development: Facts, Fictions and Follies," *New Zealand Population Review*, 33/34: 95-127, [http://panz.rsnz.org/wp-content/uploads/2010/01/nzpr-vol-33-and-34\\_gerald-haberkorn.pdf](http://panz.rsnz.org/wp-content/uploads/2010/01/nzpr-vol-33-and-34_gerald-haberkorn.pdf)

<sup>15</sup> Anita Smith and Kevin L. Jones, *Cultural Landscapes of the Pacific Islands: ICOMOS Thematic Study*, December 2007, <http://whc.unesco.org/uploads/activities/documents/activity-5-2.pdf>

is especially important to note that all of the Pacific Island communities are characterized as having a close attachment to the land and, particularly for those living on small islands, a special relationship to the ocean.

*“The sea determines our life. The coral reef is the rainforest of the sea.”*

—**Pastor Sanaila Bici**, Tuvalu

The research published to date by the Intergovernmental Panel on Climate Change (IPCC)<sup>16</sup> as well as the shared experiences of participants in the Fiji workshop show that climate change is having and is progressively going to have severe negative impacts. Both slow- and sudden-onset disasters threaten human development in the region and risk forcibly displacing large numbers of people.

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<sup>16</sup> See Intergovernmental Panel on Climate Change, *IPCC Fourth Assessment Report: Climate Change 2007, Working Group I: The Physical Science Basis, Executive Summary, Direct Observations of Recent Climate Change*, 2007, [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/spmssp-direct-observations.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/spmssp-direct-observations.html)

## 6. SUDDEN-ONSET NATURAL DISASTERS

Although no single disaster event is directly and mono-causally attributable to climate change, there has been an increase in the frequency and intensity of climatological and hydrometeorological sudden-onset disasters in the recent past. Scientists predict that a warming climate will further strengthen this global trend.<sup>17</sup> The record suggests that temperature increases in both the air and the water will increase the severity of storms, hurricanes and cyclones. In fact, the number of sudden-onset natural disasters has tripled since the 1970s and almost 90 percent of the recorded natural disasters today are climate-related.<sup>18</sup> Some 6 percent of the population of all Pacific Island countries were affected by sudden-onset disasters between 2000-2011, 87 percent of which were climatological and hydrometeorological disasters (See Table 1).

The World Bank also reports that the number of reported disasters in the Pacific has increased significantly and that disasters are becoming more intense. Hurricane-strength cyclones—those with winds stronger than 117 km per hour—have increased systematically in the southwest Pacific over the last thirty years. The total population affected by disasters has increased and economic losses have been dramatic. Samoa's economic losses during disaster years have averaged 46 percent of their GDP while the corresponding figures for Vanuatu and Tonga are 30 and 14 percent respectively.<sup>19</sup>

The impact of natural hazards on the population of the Pacific, as in other regions, is intensified by increasing urbanization, infrastructure development, deforestation and the destruction of mangrove swamps which serve as buffers from the destructive effects of tsunamis and flooding.<sup>20</sup>

Natural disasters tend to exacerbate existing vulnerabilities within the population. For example, the poor, often living on marginal land and in poorly-constructed housing, are disproportionately affected by floods, earthquakes, landslides and coastal and riverine erosion. Those who are less physically mobile—such as young children, the elderly and those with physical disabilities—may find it difficult to evacuate quickly when warnings sound. Death rates for women tend to be much higher than for men when flooding or tsunamis

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<sup>17</sup> *Ibid.*

<sup>18</sup> See EM-DAT: The OFDA/CRED International Disaster Database, [www.emdat.be](http://www.emdat.be) - Université Catholique de Louvain - Brussels - Belgium, also see [www.unisdr.org](http://www.unisdr.org)

<sup>19</sup> Bettencourt et al, *op cit*, pp. 2-6.

<sup>20</sup> Also see Alex Julca and Oliver Paddison, "Vulnerabilities and migration in Small Island Developing States in the context of climate change," *Natural Hazards* (2010): 717-728.



occur.<sup>21</sup> Moreover, relief efforts after a sudden-onset disaster can unintentionally or otherwise discriminate against vulnerable or marginalized groups.

Although the overall population in the region is small compared to other regions, natural disasters have caused relatively major displacement in several Pacific Island countries. Tsunamis in 2007 in the Solomon Islands and in 2009 in Samoa displaced 4.6 percent and 2.5 percent of the respective countries' populations, consequently posing major challenges for economic and social development.<sup>22</sup> If similar percentages were calculated vis-à-vis the populations of large countries, the resulting absolute numbers would be staggering. In the US, for example, it would mean between 6 and 14 million people displaced—figures that dwarf the 1.5 million displaced by Hurricane Katrina. However, as there is no systematic statistical recording and monitoring of displacement occurring in the Pacific region, there are no reliable overall figures for displacement from sudden-onset natural disasters.<sup>23</sup> Based on available information, it seems clear that natural disaster-induced displacement in the region is predominantly internal and caused by sudden-onset disasters.

While almost all of the participating countries at the Fiji workshop have developed and operationalized disaster management plans and policies, workshop participants noted a lack of laws and policies that specifically address individuals internally displaced by natural disasters. The lack of such laws and policies makes it more difficult to find durable solutions to their displacement. In addition, participants from several countries noted that their national disaster management plans are centered on responding to cyclones, and remain silent on other types of disaster events.

Unlike participants from the other countries, participants from Kiribati and Tuvalu noted that their countries, being atolls, would be existentially threatened in case of a major storm or tsunami because of their low elevation, with the highest points of their islands being between 3-5 meters (9 to 15 feet). Their populations could not seek refuge on high ground, but rather would remain exposed to sudden inundation and drowning.

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<sup>21</sup> See World Health Organisation, *Gender and Health in Disasters*, 2002, [www.who.int/gender/other\\_health/en/genderdisasters.pdf](http://www.who.int/gender/other_health/en/genderdisasters.pdf), See also Lorena Aguilar, "Acknowledging the Linkages: Gender and Climate Change," Presentation at the World Bank's Workshop on Social Dimensions of Climate Change, March 2008, [http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1170428243464/3408356-1170428261889/3408359-1202746084138/Gender\\_Presentation022808.pdf](http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1170428243464/3408356-1170428261889/3408359-1202746084138/Gender_Presentation022808.pdf), See also Eric Neumayer, and Thomas Plümper. "The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981–2002." *Annals of the Association of American Geographers* 97, no. 3 (September 2007): 551-566. SocINDEX with Full Text, EBSCOhost (accessed October 25, 2010).

<sup>22</sup> OHCHR, Regional Office for the Pacific, *Protecting the Human Rights of Internally Displaced Persons in Natural Disasters*, 2011, [http://pacific.ohchr.org/docs/IDP\\_report.pdf](http://pacific.ohchr.org/docs/IDP_report.pdf)

<sup>23</sup> The Internal Displacement Monitoring Centre (IDMC) has recently begun to compile data on the number of people displaced by sudden-onset natural disasters although the data for the Pacific are not disaggregated, *Displacement due to natural hazard-induced disasters, Global estimates for 2009 and 2010*, June 2011, available at: [www.internal-displacement.org](http://www.internal-displacement.org)

## SUDDEN-ONSET NATURAL DISASTERS

**Table 1:** Number of people per country affected by natural disasters during 2000-2011<sup>24</sup>

	Total Population <sup>25</sup>	Earthquake (seismic activity)	Flood	Mass movement (wet) <sup>26</sup>	Storm	Volcano	Affected people	% of population
American Samoa	67,242	2,500	0	0	20,000	0	22,500	33.46%
Cook Islands	11,124	0	0	0	3,538	0	3,538	31.81%
Fiji	883,125	0	12,280	0	78,183	0	90,463	10.24%
French Polynesia	294,935	0	0	0	3,400	0	3,400	1.15%
Guam	183,286	0	0	0	10,544	0	10,544	5.75%
Kiribati	100,743	0	0	0	0	0	0	0.00%
Marshall Islands	67,182	0	600	0	0	0	600	0.89%
Micronesia F.S.	106,836	0	0	0	7,300	0	7,300	6.83%
New Caledonia	256,275	0	0	0	0	0	0	0.00%
Niue	1,311	0	0	0	200	0	200	15.26%
Papua New Guinea	6,187,591	4,400	88,193	1,063	162,140	40,899	296,695	4.80%
Samoa	193,161	5,275	0	0	0	0	5,275	2.73%
Solomon Islands	571,890	3,500	23,016	0	275	0	26,791	4.68%
Tokelau	1,384	0	0	0	0	0	0	0.00%
Tonga	105,916	500	0	0	16,500	0	17,000	16.05%
Tuvalu	10,544	0	0	0	0	0	0	0.00%
Vanuatu	224,564	1,000	3,950	0	54,505	18,900	78,355	34.89%
<b>Total</b>	<b>9,256,565</b>	<b>17,175</b>	<b>128,039</b>	<b>1,063</b>	<b>356,585</b>	<b>59,799</b>	<b>562,661</b>	<b>6.08%</b>

<sup>24</sup> Source: EM-DAT: The OFDA/CRED International Disaster Database, [www.emdat.be](http://www.emdat.be) - Université Catholique de Louvain - Brussels – Belgium” Created on: Jun-30-2011. - Data version: v12.07.

<sup>25</sup> Central Intelligence Agency, CIA World Factbook, July 2011 estimates, accessed: 6 July 2011.

<sup>26</sup> EM-DAT distinguishes between two kinds of hydrological disasters, “Flood” and “Mass Movement (wet)”. Mass Movement (wet) includes avalanches, landslides, rockfalls and subsidence, See further: [www.emdat.be/classification](http://www.emdat.be/classification)



## 7. WHEN THE SEA LEVEL RISES, “THERE IS NO PLACE TO RUN”

*“There’s no place to run. Maybe our adaptation strategy should be to build an ark.”*

—**Kaateti Toto**, Ministry of Environment, Lands & Agriculture Development, Kiribati

The Intergovernmental Panel on Climate Change (IPCC) holds that small island states are at great risk from the projected impacts of climate change, particularly in terms of slow-onset effects such as rising sea levels:

Sea-level rise poses by far the greatest threat to small island states relative to other countries. Although the severity of the threat will vary from island to island, it is projected that beach erosion and coastal land loss, inundation, flooding, and salinization of coastal aquifers and soils will be widespread. Moreover, protection costs for settlements, critical infrastructure, and economic activities that are at risk from sea-level rise will be burdensome for many small island states. Similarly, tourism—the leading revenue earner in many states—is projected to suffer severe disruptions as a consequence of adverse impacts expected to accompany sea-level rise.<sup>27</sup>

Rising water temperatures and acidification of the sea (as a result of absorption of carbon dioxide by sea water) also negatively impact coral reefs, threatening both the physical and economic foundations of atoll countries like Tuvalu and Kiribati. Coral bleaching—which occurs when coral reefs turn whiter because organisms living with the corals lose their pigment or die—results from stress placed on corals such as rapid sea temperature changes. The loss of coral reefs not only affects coral-related livelihoods but leaves many islands unprotected to bear the brunt of ocean waves and storms.<sup>28</sup>

*“Tuvalu is made up of 9 islands with a total area of 25.6 sq kilometers. The highest point is 3 meters. Our country is shrinking by erosion, there is a shortage of drinkable water and many small islets are starting to disappear.”*

—**Pastor Sanaila Bici**, Tuvalu

<sup>27</sup> IPCC, *Climate Change 2001, Working Group II: Impacts, Adaptation and Vulnerability, Chapter 17: Small Island States*, 2001, <http://ipcc.ch/ipccreports/tar/wg2/index.php?idp=621>

<sup>28</sup> Ilan Kelman, “Dealing with climate change on small island developing states,” *Practicing Anthropology*, vol. 33, no. 1, Witner 2011, pp. 27-28.



Even countries with large masses of highly elevated land are not immune to the effects of rising sea levels, in so far as their cities and major infrastructure are located in coastal areas. Changing rainfall patterns also makes precipitation scarcer in certain countries of the region, which cuts into the availability of fresh water, and, in the worst-case scenario, leads to more frequent droughts.<sup>29</sup>

During the workshop in Fiji, participants from several countries confirmed these assessments, sharing experiences about environmental degradation caused by the incursion of sea water, especially during the seasonal king tides. In the Carteret Islands off of Papua New Guinea, for example, agricultural production has been devastated by higher king tides which have flooded farmland with sea water and have led communities to seek other places to live on the mainland.

*“The island is sinking. Sea level rise has covered my mother’s grave.”*

— **Ruth Maetala**, Solomon Islands

Workshop participants saw the emphasis on climate change adaptation policies and measures as a positive development. However, concerns were voiced that adaptation plans were not adequately far-reaching and focused too heavily on physical infrastructure at the expense of building community and governmental capacity to respond to the coming challenges. This focus on physical infrastructure and technical expertise has made it difficult to access international funds intended to support adaptation measures for countries facing the negative effects of climate change, such as migration and planned relocations.

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<sup>29</sup> Bettencourt et al, op cit, pp. 6-7.

## 8. MIGRATION AND DISPLACEMENT

*“To take a Pacific Islander to the mainland is a sin.”*

—**Vaasili Moelagi Jackson**, Samoa Red Cross

While previous natural disasters can provide some indication of the potential scale of displacement from more frequent and strong sudden-onset disasters in the future, at this time it is not possible to quantify and predict how much displacement the slow-onset effects of climate change will cause, as they are functions of various assumed scenarios of global warming and often do not take into account adaptation measures.<sup>30</sup>

In cases of slow-onset environmental degradation, the line between what constitutes ‘economic migration’ (presumed to be voluntary) and what constitutes ‘displacement’ (presumed to be involuntary or forced) will also be quite blurred. Some may leave in anticipation of the effects of climate change; others may wait until there are no other options. Individuals and families assess risk differently and make decisions accordingly. Although there has as yet been little research, it is likely that those inclined to leave earlier are the young, healthy and mobile. Those left behind are likely to be the elderly, those with physical disabilities and other vulnerable groups.<sup>31</sup>

*“The elderly don’t want to leave.”*

—**Ruth Maetala**, Fikutaikini East Kwara’ae Women’s Association, Solomon Islands

Questions also arise regarding the entitlement of assistance for people who have to move because of slow-onset climate change effects. Throughout history, human beings have used migration as an adaptation strategy to deal with adverse changes in climatic and

<sup>30</sup> While the IPCC develops estimates based on an assumed conservative warming level of 2 degrees, some researchers have examined scenarios based on higher levels: see, for instance: François Gemenne, *Migrations et déplacements de populations dans un monde à + 4°C*, IDDRI, N°414/2011. Etudes, 2011. 12 p., <http://www.iddri.org/Publications/Publications-scientifiques-et-autres/Migrations-et-deplacements-de-populations-dans-un-monde-a-+4-C>

<sup>31</sup> Jon Barnett and Michael Webber suggest that those with secure land holdings will be less likely to leave and that the lower middle classes will be the most likely to leave earlier as they have the means to travel. Jon Barnett and Michael Webber, “Migration as Adaptation: Opportunities and Limits,” in Jane McAdam, ed. *Climate Change and Displacement: Multidisciplinary Perspectives*, Oxford and Portland, Oregon: Hart Publishing, 2010, p. 41.

other conditions, and historically migration (both internal and external) has been and still is a common phenomenon in some Pacific countries, primarily for economic reasons. For example, outward migration of Pacific Islanders from Polynesian countries, such as Samoa and Tonga, to New Zealand has been aided in part by favorable legislation enacted for this purpose, as well as through the granting of temporary work visas. In contrast, the Melanesian countries of Papua New Guinea, Vanuatu and the Solomon Islands have not had the same possibilities. Currently an estimated 57 percent of Samoans and 46 percent of Tongans live outside their countries.<sup>32</sup> Reflecting these migratory patterns, the populations of Samoa and Tonga rose by only 12 percent between 1995 and 2005 while the populations of these three Melanesian islands increased by 73 percent, greatly impacting upon their standard of living.<sup>33</sup>

*“It’s hard to prepare for disasters on the outer islands. Shipping is decreasing and you might only get shipments once or twice a year. If you don’t have batteries, you can’t listen to the radio to get warnings.”*

—**John Campbell**, University of Waikato

Internal migration to main islands and urban areas poses a whole set of problems to Pacific Island governments. As elsewhere in the world, Pacific Islanders are increasingly moving to cities amid migratory trends from outlying islands to more populated ones. Urbanization also threatens to make natural disasters a more urban phenomenon with all the challenges that such disasters (as witnessed in the 2010 earthquake in Haiti, for example) pose for governments, humanitarian and development actors. At the same time, the concentration of populations in urban areas can also increase the isolation of and risk to communities living in remote areas.

Atoll countries like Kiribati and Tuvalu face an additional risk of becoming completely uninhabitable because of rising sea levels. If sea levels reach a certain point, the whole population will have to resettle in some other country or countries. Indeed, these countries’ plight in this respect has garnered much international attention of late. Still, even in those extreme cases, outmigration is likely to be a gradual process rather than a one-off event. And as Mortreux and Barnett report, the vast majority of those Tuvaluans who are consid-

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<sup>32</sup> Jane McAdam, “‘Disappearing States,’ Statelessness and the Boundaries of International Law,” in McAdam, op cit., p. 115.

<sup>33</sup> Charles W. Stahl and Reginald T. Appleyard, *Migration and Development in the Pacific Islands: Lessons from the New Zealand Experience*, April 2007, pp. 1-3, [www.ausaid.gov.au/publications/pdf/migration.pdf](http://www.ausaid.gov.au/publications/pdf/migration.pdf). Also see Ilan Kelman “Island Security and Disaster Diplomacy in the Context of Climate Change,” *Les Cahiers de la Sécurité*, vol. 63, 2006, pp. 21-64. (Authorized English version available at [www.ilankelman.org](http://www.ilankelman.org))

ering migration do not give climate change as their reason for leaving, but predominantly economic concerns.<sup>34</sup>

While much of the literature on climate change and the Pacific focuses on the possibility of islands, particularly low-lying atolls, which may become submerged by the ocean, in fact it is likely that areas—and countries—will become uninhabitable long before they are submerged.

In this respect, John Campbell from the University of Waikato, New Zealand, developed several scenarios estimating the number of people in Pacific countries who might be affected by the above-mentioned effects of climate change. Campbell found that an estimated 665,000 to 1.7 million individuals would migrate or be forcibly displaced due to the effects of climate change, factoring in projections of population growth (see Table 2).

**Table 2:** How many climate induced migrants might there be in 2050? Scenarios

	based on 2009 estimates		based on 2050 projections	
	low	high	low	high
Atolls	240,000	240,000	320,000	320,000
Coasts	95,000	350,000	180,000	580,000
Rivers	80,000	400,000	165,000	825,000
<b>Totals</b>	<b>415,000</b>	<b>990,000</b>	<b>665,000</b>	<b>1,725,000</b>

Source: © The University of Waikato

Destinations for migration/displacement might be in many cases internal, both within and outside of customary land. Migration might also be directed towards urban areas. International migration, which may be particularly necessary for residents of atoll countries, could be directed at other Pacific countries. There have already been historic precedents for this such as movements from Banaba, Gilbert Islands (now Kiribati) to Rabi, Fiji after World War II; from Vaitupu, Ellis Islands (now Tuvalu), to Kioa, Fiji; and Gilbertese to Western Province, Solomon Islands). These relocations were made possible as they all took place among British colonies. There is also considerable migration to Pacific Rim countries and to former colonial powers (Australia, New Zealand, USA, United Kingdom, France).

Community relocation will be extremely difficult and costly and the degree of difficulty and cost will rise exponentially with increasing distance from the original home of the community. Relocations also run the risk of being top-down initiatives in which communities are rarely involved in making decisions which affect their future. Some have argued that per-

<sup>34</sup> Colette Mortreux and Jon Barnett, "Climate change, migration and adaptation in Funafuti, Tuvalu," *Global Environmental Change* 19 (2009): 105-112. See also Shawn Shen, François Gemenne, "Contrasted Views on Environmental Change and Migration: the Case of Tuvaluan Migration to New Zealand," *International Migration*, Volume 49, Issue Supplement s1, 19 May 2011, <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-2435.2010.00635.x/pdf>

manent resettlement is unlikely to be necessary either because adaptation measures will enable people to remain where they are or because people will make individual decisions to migrate before conditions become uninhabitable.<sup>35</sup>

Tensions over land rights as well as loss of cultural and community cohesion will likely constitute some of the negative effects of population relocations. While prior resettlement schemes for populations in the region have not been very successful, as in the cases mentioned above, some planned relocations might be inevitable as a last resort. Many workshop participants felt strongly that well-planned and executed resettlement might be preferable to holding off until the full effects of climate change came to bear on them.

In the case of the Carteret Islands in Papua New Guinea, resettlement of the population to the larger island of Bougainville has already started in response to the negative effects of rising sea levels, particularly coastal erosion and the effects of higher tides on agricultural land. The program aims to relocate 50 percent of the islands island's population (i.e. 1,350 individuals) by 2020. But this has been a difficult process to date.<sup>36</sup> Aside from finding funding for the program and logistical issues, integration with local host communities and the re-establishment of livelihoods are some of the key challenges in every resettlement process.

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<sup>35</sup> See for example, Barnett and Webber, op cit., pp. 37-55. Also see Graeme Hugo, "Climate Change-Induced Mobility and the Existing Migration Regime in Asia and the Pacific," pp. 9-35 in Jane McAdam, op cit. Also see Roger Zetter, *Protecting environmentally displaced people, Developing the capacity of legal and normative frameworks*, Refugee Studies Center, University of Oxford, 2011 [www.rsc.ox.ac.uk/pdfs/Zetter-%20EnvDis-pRep%2015022011.pdf](http://www.rsc.ox.ac.uk/pdfs/Zetter-%20EnvDis-pRep%2015022011.pdf); also see Mortreux and Barnett, 2009, op cit.

<sup>36</sup> See Jennifer Redfearn, *Sun Come Up*, Documentary, 2010, see also: Tulele Peisa, <http://tuelepeisa.org/>



## 9. DEVELOPMENT-CAUSED DISPLACEMENT: POLICY AND STRATEGY LESSONS FOR CLIMATE CHANGE

Most of the current literature on displacement and the Pacific Islands focuses on disaster- and conflict-induced displacement, with very few studies on development-caused displacement. In practice, however, much displacement has been and continues to be caused by recent or ongoing state-sponsored and planned development projects. Many such projects need the “right of way” for the footprint areas of their constructions and thus their sponsoring and implementing agencies willfully plan in advance for displacing the inhabitants of the necessary “right of way” areas.

Among these state projects, a good number have been or are currently being initiated not only by the governments of the Pacific Islands themselves, but are also supported and financed by major international agencies such as the Asian Development Bank or the World Bank (e.g., projects in Kiribati, PNG, and other islands) or by bilateral aid agencies. These projects must be consistent with the agencies’ social and environmental safeguards policies. Therefore when displacing people, the agencies must build into the projects themselves the mechanisms, and resources to provide sound resettlement and reconstruction alternatives for those resettled. Most fundamentally, these safeguards include the protection of the human rights of the populations being displaced and the restoration of their livelihoods.

Furthermore, these international safeguard policies are triggered by the commitments of the international donors regarding their lending and aid operations, even when the recipient countries themselves do not yet have legislation that mandates such resettlement and rely only on existing eminent-domain-based policies regarding expropriation and compensation. When projects correctly implement the prescriptions of the international safeguard policies, then such reconstruction approaches may provide valuable practical experiences useful for future displacements made necessary by the effects of climate change.

In addition, the history of the Pacific Islands includes a number of private sector-financed interventions that have not only exploited the rich natural resources of the Pacific Islands in a predatory manner, but have also caused significant forced population displacement. A blatant example of this category of interventions is the exploitation of phosphate resources



of the Banaba Island, a case discussed in the Fiji workshop by representatives of the Pacific Conference of Churches (PCC) and its social researcher Julia Edwards.<sup>37</sup>

What this means for policy and practical purposes, as well as for the ongoing science research on climate change, is that Pacific Island countries have another broad body of existing experiences, accumulated from human-initiated interventions, which should be examined for their lessons of success and failure as relevant to the new climate-posed challenges.

This also brings to the fore the broader, global question of what can be learned directly from development-caused displacement and resettlement to increase capacity for responding to emerging future needs of population relocation.

The Fiji Workshop devoted considerable discussion to addressing this set of still little-examined issues, in presentations by Michael M. Cernea<sup>38</sup> and Susanna Price<sup>39</sup> and in discussions among participants. Firstly, it was strongly emphasized that, notwithstanding differences, the multiple similarities between the displacement caused by slow-onset climate change and displacement resulting from infrastructure development projects provide a strategic cognitive advantage for crafting operational approaches and longer term strategies to meet the displacement risk stemming from new challenges of rising sea levels and other effects of climate change. Both types of displacement result ultimately from human action—whether through carbon emissions contributing to global warming, infrastructure construction projects or natural resource exploitation projects.

In most cases of uprooting caused by development projects, the displacement and resettlement implications are known long in advance of the actual project start and thus give the cognitive and operational advantages intrinsic in processes with slow onset. Such processes lend themselves to advance planning for counter-risk actions. The requirements for designing Resettlement Action Plans (RAPs) in development projects are by now well codified and known (even though they are frequently not met).<sup>40</sup> Therefore, the experiences

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<sup>37</sup> Julia Edwards, *Phosphate mining and the relocation of the Banabans to Rabi Island*, Pacific Conference of Churches, May 2011. The author, a social researcher working for the PCC, reconstructed in this paper the history of a private sector project which had literally dug out the phosphate-rich land of Banaba Island from under the feet of its native population, without any regard for the population's livelihood. That destructive environmental intervention made the island's population's survival impossible on the depleted rocks and forced its displacement and relocation to Rabi Island, with all the attendant consequences of exploitative impoverishment and destitution.

<sup>38</sup> Michael M. Cernea, *Climate Change and Development-Caused Population Displacement and Resettlement*, Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific, Fiji, Suva, May 4, 2011.

<sup>39</sup> Susanna Price, "Learning from Development-Forced Displacement", Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific, Fiji, Suva, May 6, 2011.

<sup>40</sup> Many Resettlement Action Plans, unfortunately, are not consistent with the requirements formulated in the resettlement policies, and, furthermore, the provisions included on paper are often not implemented on the ground as they should be. The international agencies, including the World Bank, Asian Development Bank, Inter-American Development Bank and African Development Bank, are often justifiably critiqued for their recurrent failures in implementing their policies coherently and consistently, as well as for their failure to account for their performance in resettlers' livelihood restoration and improvement.

accumulated under those development interventions that do follow well-tailored social safeguards, address risks adequately and implement reconstructive strategies can be drawn upon as a source of knowledge for future capacity building.

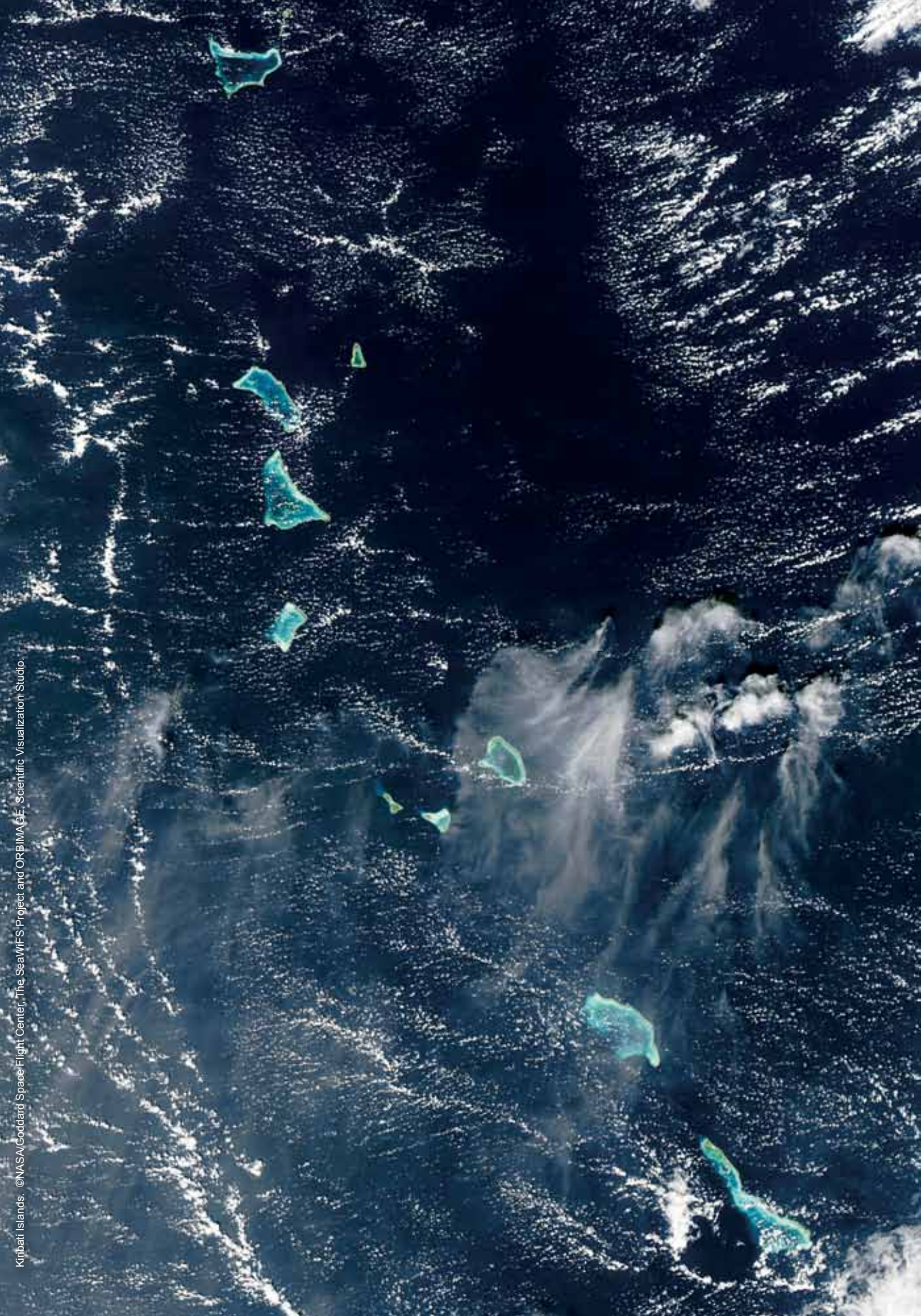
For the case of development-caused displacement, throughout the last decades, international development banks have developed a set of “*safeguard policies*” to protect the rights of persons displaced and resettled by those projects. Significant risks for people affected by displacement must be identified upfront. These include a set of eight fundamental, recurrent and concomitant risks of impoverishment: loss of land; loss of jobs; loss of housing; economic and social marginalization; health risks, in terms of increased morbidity and mortality; food insecurity; loss of access to common property resources; and community disarticulation.<sup>41</sup> The policy of the World Bank and other development banks enacted as their basic goal was to not only restore but to also improve the economic situation of resettled persons. Still, many projects have failed, and continue to fail today, in achieving this central objective, resulting in the pauperization of those displaced. Reasons for those failures are multiple: weak preparation capacities, bad planning, chronic under-financing of reconstruction, absent supervision, institutional corruption, lack of land, etc.<sup>42</sup>

Beyond sound policies, adequate and timely financing was highlighted in the Fiji workshop as one of the critical issues governments will have to sort out, in order to timely fund resettlement projects made necessary by the effects of climate change. Developing country governments might not have the financial means and technical capacity for resettling numerous communities. The framework for international climate change adaption funding developed to date does not yet explicitly include funds for resettlement projects and specified capacity building policy and practical programs.

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<sup>41</sup> For a detailed discussion of this model of displacement risks and reconstruction strategies, see Michael Cernea, “Impoverishment Risks, Safeguards, and Reconstruction: A Model for Population Displacement and Resettlement”, in vol. *Risks and Reconstruction: Experiences of Resettlers and Refugees*, Washington DC., World Bank. 2000, pp. 11-55.

<sup>42</sup> For the workshop report, see Brookings-LSE Project on Internal Displacement, UN OCHA, OHCHR, *Regional Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific, Synthesis Report*, June 2011, [www.brookings.edu/events/2011/0506\\_idp\\_fiji\\_workshop.aspx](http://www.brookings.edu/events/2011/0506_idp_fiji_workshop.aspx). Many research reports and recent books on development-caused forced displacement and resettlement (DFDR) abundantly document and analyze these and other categories of failures.



Kiribati Islands. ©NASA/Goddard Space Flight Center, The SeaWiFS Project and ORBIMAGE, Scientific Visualization Studio.



## 10. “SINKING ISLANDS” AND THE ISSUE OF DE-TERRITORIALIZATION

There has also been a tendency to focus the debate internationally on the “sinking islands scenario” whereby citizens from countries such as Kiribati and Tuvalu will have to cross international borders as their islands disappear from rising sea levels.<sup>43</sup> The Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report cites Patel<sup>44</sup> and Barnett<sup>45</sup> arguing that “there would be enormous economic, cultural and human costs if large populations were to abandon their long-established home territories and move to new places. Sea-level rise impacts on the low-lying Pacific Island atoll states of Kiribati, Tuvalu, Tokelau and the Marshall Islands may, at some threshold, pose risks to their sovereignty or existence.”<sup>46</sup> Susin Park notes that “[a]ccording to some estimates, Tuvalu could disappear in the next 50 years, and its government has raised the potential for its complete inundation as a key concern. Likewise, Kiribati has sought assurances for its population in the event that its entire territory is submerged.”<sup>47</sup> On the other hand, some researchers caution against jumping to the conclusion that such massive resettlement will be necessary.<sup>48</sup>

While the fate of the inhabitants of those atoll countries should be a major concern, discussions at the Fiji Workshop stressed the need to place greater emphasis on internal migration and internal relocation, given that options for international relocation are constrained by many considerations, most fundamentally by the fact that affected populations in many cases do not want to abandon their historical home and habitats.

Significant sea-level rise which might completely inundate certain very low-level Pacific Islands in the future, and thus might result in total island population displacements, are conceptualized today as “de-territorializing” entire island states. The concern that some

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<sup>43</sup> See for example, Susin Park, *Climate Change and the Risk of Statelessness: The Situation of “Sinking Island States”*, UNHCR, Division of International Protection, PPLAS/2010/01, January 2011.

<sup>44</sup> S. S. Patel, “Climate science: A sinking feeling,” *Nature*, 440, 2006, pp. 734-736.

<sup>45</sup> J. Barnett, “Titanic states? Impacts and responses to climate change in the Pacific islands”, *Journal of International Affairs*, 59, 2005, pp. 203-219.

<sup>46</sup> Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Chapter 17.4.2.5 Social and cultural barriers*, 2007.

<sup>47</sup> Susin Park. p. 1.

<sup>48</sup> Shawn Shen, François Gemenne, “Contrasted Views on Environmental Change and Migration: the Case of Tuvaluan Migration to New Zealand,” *International Migration*, Volume 49, Issue Supplement s1, 19 May 2011, <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-2435.2010.00635.x/pdf>

of the islands may be particularly at risk because of their low-lying territories was one that surfaced in the workshop discussion. In fact, a number of studies have already begun to debate—perhaps too prematurely—the legal implications of “non-territorial state entities” and of portable sovereignty.<sup>49</sup>

Significantly, however, several community representatives participating in the workshop—particularly the representatives of Samoa and those from the Pacific Conference of Churches—have pointedly called attention to the opposite perspective, relevant both for domestic policy and for the orientation of international assistance. Namely, it was stressed that the local populations themselves are not primarily interested in contemplating such uprooting and the perspective of becoming immigrants in foreign lands. Priority over other international migration options must be given, it was emphasized, to locally based preparation and adaptation solutions, which would help maintain the populations and their culture within their own place and own natural resource base. The avoidance of climate change risks should not necessarily become a rationale for acquiescing to the substitute risks of displacement and diaspora relocation. One particularly poignant example was given from the Carteret Islands, where local initiatives are already afoot and being implemented to assist the gradual re-establishment of families currently inhabiting particularly hazardous low-level areas to safer locations.<sup>50</sup>

What happened in the Banabans in the 1940s is relevant to the type of scenarios sketched out by those who are today rushing to suggest total population transfer in the not-distant future from some islands to other shores or larger countries. Indeed, as Edwards explained, the full population of the Banaba Island had to relocate and move to a different island in the Pacific archipelago several decades ago. The specific cause differed, although it was man-made as well. At that time, total relocation was not because the rising sea covered the island’s soil but because the island’s rich and fertile soil disappeared due to another process: it was carried away by intensive, long-term, socially and environmentally irresponsible phosphate mining by private foreign companies. The outcomes of that past scenario should perhaps give some pause today; those outcomes call for a more informed and in-depth consideration and elaboration of feasible strategies for subsequent social-economic and ethnic integration, as well as for long term sustainable reconstruction.

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<sup>49</sup> Norwegian Refugee Council, *Climate Changed: People Displaced*, Reports, 2009, see also Columbia Law School, “Consolidated notes from: Threatened Island Nations, Legal Implications of Rising Seas and a Changing Climate”, May 23-25 May 2011, [http://www.law.columbia.edu/null/download?&exclusive=filemgr.download&file\\_id=59134](http://www.law.columbia.edu/null/download?&exclusive=filemgr.download&file_id=59134)

<sup>50</sup> See Brookings-LSE Project on Internal Displacement, UN OCHA, OHCHR, *Regional Workshop on Internal Displacement caused by Natural Disasters and Climate Change in the Pacific, Synthesis Report*, Suva, Fiji, 2011.

## 11. CONCLUDING THOUGHTS ON DISPLACEMENT, PLANNED RELOCATION AND MIGRATION IN THE PACIFIC

The complexities of the relationship between climate change and displacement are still far from being understood and grasped. The estimates of the number of people who may have to move as a result of climate change vary enormously; the differences seem to depend on which of the scenarios presented by the Intergovernmental Panel on Climate Change is used<sup>51</sup> while in some cases they are mere speculations by their authors. Perhaps the most difficult aspect of understanding the relationship between climate change and the movement of people is the difficulty of separating out the effects of climate change from other factors in people's decisions to migrate.<sup>52</sup>

Humanitarian actors have been discussing the implications of climate change for several years under the aegis of the Inter-Agency Standing Committee. The United Nations Framework Convention on Climate Change (UNFCCC) also noted the importance of the issue, when in Cancun in December 2010, the Ad Hoc Working Group on long-term Cooperative Action adopted a statement acknowledging the need to address the movement of people as a climate change adaptation measure by undertaking:

“14 (f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels.”<sup>53</sup>

This opens the door to further research and action in three interrelated areas: displacement, migration and assisted planned relocations. Each of these three types of movement is associated with different actors. Humanitarian actors have generally focused on forced displacement while development actors have been the leading actors in issues of planned relocations. Those working on migration, such as the International Organization for Migra-

<sup>51</sup> IOM Policy Brief, “Migration, Climate Change and the Environment,” May 2009, [www.iom.int/jahia/webdav/.../policy.../policy.../policy\\_brief\\_envmig.pdf](http://www.iom.int/jahia/webdav/.../policy.../policy.../policy_brief_envmig.pdf)

<sup>52</sup> Many authors have written about the difficulties in attributing the cause of migration to climate change. See for example, Roger Zetter, “Protecting people displaced by climate change,” *op cit.*, pp. 137-139.

<sup>53</sup> UNFCCC, Outcome of the work of the *Ad Hoc* Working Group on long-term Cooperative Action under the Convention, /-CP.16, Cancun, 2010.



tion, have had a foot in both worlds. Most observers think that migration will be the most widely-used adaptation strategy in responding to the effects of climate change.<sup>54</sup>

Migration is an adaptation strategy which has been used for millennia to respond to changes in the environment and migration takes many forms. Some is temporary, some circular, some permanent. Some migration is completely voluntary, some is undertaken because people perceive there is simply no other way to survive.<sup>55</sup> Some migration is international, most occurs within national borders. Graeme Hugo is convincing when he argues that past mobility is likely to be a factor in determining future environmental migration. “Other things being equal,” he writes “mobility is likely to be seen more as an option in communities with a history of movement and active migration networks.”<sup>56</sup>

The difference between spontaneous migration (i.e., self-initiated) and displacement connotes a major difference in the degree of voluntariness, but also, in the context of climate change, a difference in timing. Hugo writes, “Migrating prior to a change in environmental conditions that will make it impossible to remain in a place could be considered adaptation, whereas migrating when all viable options have been used up and it is not possible to remain in a place, is displacement.”<sup>57</sup> Those displaced within the borders of their country are internally displaced persons and hence are to be protected and assisted in accordance with the *Guiding Principles on Internal Displacement*,<sup>58</sup> the prevailing normative framework.

In contrast, under current international law, there is no special treatment to be accorded to those displaced when they relocate outside national borders. They are not refugees under the 1951 Refugee Convention, but rather are considered by receiving governments as economic migrants. UNHCR in particular has been concerned about this gap in protection and in June 2011, at a major conference to commemorate the Refugee Agency’s 60<sup>th</sup> anniversary, the idea of developing Guiding Principles for dealing with those displaced by the effects of climate change was presented.<sup>59</sup> Others have suggested that new international legal instruments are needed.<sup>60</sup>

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<sup>54</sup> See for example, International Organization for Migration, *Migration, Environment and Climate Change: Assessing the Evidence*, edited by Frank Laczko and Christine Aghazarm, Geneva: IOM, 2009. Also see remarks by Michele Klein Solomon in Columbia Law School, “Threatened Island Nations, Legal Implications of Rising Seas and a Changing Climate”, May 23-25 May 2011.

<sup>55</sup> Alexander Betts, “Survival Migration, A New Protection Framework”, *Global Governance* 16 (2010), 361–382.

<sup>56</sup> Graeme Hugo, “Climate Change—Induced Mobility,” *Op cit.*, p. 21.

<sup>57</sup> Graeme Hugo, *Op cit.*, p. 13.

<sup>58</sup> UN Commission on Human Rights, *Guiding Principles on Internal Displacement*, E/CN.4/1998/53/Add.2, 1998, [www.brookings.edu/projects/idp/gp\\_page.aspx](http://www.brookings.edu/projects/idp/gp_page.aspx)

<sup>59</sup> Margareta Wahlström, Harald Dovland, Chairpersons Summary, Nansen Conference on Climate Change and Displacement in the 21st Century, Oslo, 6-7 June 2011.

<sup>60</sup> Jane McAdam writes about components for a global guiding framework for climate-change related movement in McAdam, *Climate Change Displacement and International Law: Complementary Protection Standards*, UNHCR, Legal and Protection Policy Research Series, May 2011, <http://www.unhcr.org/4dff16e99.html>, p. 62 ff.

Finally, John Campbell defines the term 'relocation' as the:

"Permanent (or long-term) movement of a community (or a significant part of it) from one location to another, in which important characteristics of the original community, including its social structures, legal and political systems, cultural characteristics and worldviews, are retained: the community stays together at the destination in a social form that is similar to the community of origin."<sup>61</sup>

Although there is much that is not known about the scale or pace of population movement resulting from the effects of climate change, it seems clear that migration, displacement and planned relocation should all be considered as adaptation strategies for the Pacific Islands as well as for other regions. But the Pacific Islands, as the frontlines in climate change, must be in the frontlines of both research and implementation of adaptation initiatives.

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<sup>61</sup> John Campbell, "Climate-induced Community Relocation in the Pacific: The Meaning and Importance of Land," in McAdam ed., *Climate Change and Displacement*, op cit., pp. 58-59.





## 12. RECOMMENDATIONS

1. While efforts must continue and intensify to implement mitigation measures which will reduce the effects of climate change, governments and civil society of the Pacific Islands should play the leading role in advocating for adaptation measures which will prevent the need for migration, displacement and planned relocations and enable their people to remain where they are. At the same time, it is only prudent that Pacific Islanders consider population movements as possible adaptation measures.
2. Given the region's rich and varied (though often painful) experiences with displacement, these experiences need to be collected, studied and disseminated so that they can serve as a basis for evidence-based policies.
3. While internal population displacement and resettlement caused by both sudden and slow-onset natural disasters present serious challenges to Pacific Island countries, governments in the region have not sufficiently addressed displacement and resettlement in their national legal frameworks. Pacific Island governments should thus a) review their national laws and policies to identify areas where legal or policy changes are needed, and b) implement the necessary changes. Civil society groups should press their governments to carry out these actions and monitor their progress. International actors should stand willing to provide necessary technical assistance to support these legal and policy changes.
4. There is still a lack of awareness on protection issues in natural disasters, especially with regard to internally displaced persons, throughout the region. Government institutions, the UN, international organizations, NGOs and universities can play important roles in raising awareness about protection issues and the need for a rights-based approach to natural disasters. Guidelines, tools and checklists such as those presented in the workshop, should be shared among different actors and translated into local languages.
5. Governments of Pacific Island countries should incorporate the building of institutional and technical capacities for migration, displacement and planned relocations into their national climate change adaptation plans, and tailor such plans to address, prevent and mitigate the well-known risks of human rights violations and impoverishment embedded in virtually all compulsory displacements.
6. The global adaptation funds, such as the Green Climate Fund, should recognize that migration, displacement and planned resettlement are effective adaptation strategies and ensure that planning for such population movements is incorporated into the criteria for funding.

7. Relocation of persons affected by the negative effects of natural disasters and climate change should be a measure of last resort and any relocation should attempt to preserve the cultural and social cohesion of the resettled communities. Because of the fact that many of the negative effects develop over time, long-term planning by affected governments and communities should be encouraged. Lessons learned from other fields (for example development-caused displacement) should be incorporated into relocation and resettlement plans.
8. Guidelines should be developed for governments and international actors to use in resettling communities affected by climate change which reduce their risks of impoverishment and uphold their basic human rights.
9. As displacement resulting from the effects of climate change will have both slow and sudden-onset elements, solutions will need to be informed by both development and humanitarian policies and actors. Although cooperation between UN agencies in the Pacific is strong, joint and coordinated planning between humanitarian and development agencies is needed. Moreover, the role of civil society, particularly the churches, is especially important in the Pacific Islands. Their knowledge and organizational abilities need to be incorporated into international and regional initiatives intended to respond to climate change.
10. Because of the strong impact of climate change on many Pacific Island states, it is incumbent upon the region to position itself at the forefront of finding solutions to the challenges posed by climate change. This will require the commitment of governments in the region and of international actors.





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