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Climate Change and Migration in the South Pacific Region: Policy Perspectives

Introduction

The aim of this article¹ is to outline some of the key issues and themes discussed at the Institute of Policy Studies symposium in July 2009 on 'Climate Change and Migration in the South Pacific Region: policy perspectives'. The linkages between climate change, environmental degradation and migration are manifold and not always clearly perceived.

Moreover, many of the issues they raise are potentially controversial. The focus of the conference was on the possibility of climate change-related migration in the South Pacific, one of the regions of the world predicted to be most affected by the impacts of climate change. The conference used regional examples of situations where adverse environmental

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events and processes have already resulted in migration and displacement as a lens through which to consider the wider human mobility and humanitarian issues raised by climate change globally. The conference also considered policies at the national level (e.g., is it possible to achieve a holistic government approach on these matters?) and international level (e.g., why is the humanitarian impact of climate change and more specifically environmentally-induced migration not included in the current United Nations Framework Convention on Climate Change (UNFCCC)?)

To begin with, we wish to clarify our usage of terms in this article. 'Migration' typically describes 'a process of population movement, either across an international border or within a state, encompassing any kind of movement of people, whatever its length, composition and causes, such as (but not limited to) migration of refugees, displaced persons, uprooted people, and economic migrants' (IOM, 2004, p.41;

see also Kilot, 2004, p.76). Often migration is divided into categories of 'forced' and 'voluntary', but in the context of environmentally-induced migration the line between these groupings becomes blurred. Instead, one may try to imagine a continuum from clear cases of forced migration to clear cases of voluntary migration, with a large 'grey zone' in between (IOM, 2009, p.5). Exceptional cases are those of movement for survival due to imminent or acute environmental disaster, for which the term displacement may be most appropriate (IOM, 2004, p.19).² More generally, these and other phenomena related to the movement of people are subsumed under the larger concept of human mobility.

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Importantly, no internationally accepted term exists to date for persons moving for environmental reasons. In an effort to capture the complexity and breadth of the phenomenon, the International Organization for Migration (IOM) has advanced the following working definition of environmental migrants:

Environmental migrants are persons or groups of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad. (IOM, 2007; 2008, p.399)

For the purposes of this article, the term climate changerelated migration (as a sub-category under the umbrella of environmentally-induced migration) will be employed to describe this new, relatively uncharted territory of migration. The term recognises that climate change *sensu strictu* is unlikely to generate population movements, but rather does so via associated events and processes which affect the relationship between societies and their environment.

The context

To outline the context in which the conference was set, we wish to address three questions around which the different sessions of the conference were organised, namely:

- What are the challenges in integrating migration in the climate change debate?
- Why now?
- Why the South Pacific region?

What are the challenges in integrating migration in the climate change debate?

Until comparatively recently the impact of climate change on migration has remained largely beneath the domestic and international policy radar. This is despite the Intergovernmental Panel on Climate Change (IPCC) noting in its First Assessment Report that 'the gravest effects of climate change may be those on human migration' (IPCC, 1990, p.103). A number of reasons for this can be identified.

First, the causes of climate change-related migration are complex. Environmental factors have long had an impact on global migration flows. Environmental events and processes,

both fast- and slow-onset, including cyclones, floods, desertification, soil erosion and changing coast lines, can induce migration. Environmental factors, however, interact with numerous other conditions in places of origin and destination, including levels of development, human rights and conflict, politics and governance, and issues at the individual and household level, such as age and gender. Climate change adds another layer to an already complex nexus between migration and the environment.

This makes it difficult to establish clear-cut causal linkages between climate change and migration or to isolate environmental factors as exclusive drivers of any particular migration phenomenon. Given the 'hard evidence'-focused context in which climate change policy generally exists, the lack of reliable data and of unambiguous causalities in this area may have driven a misperception that the possible human mobility and humanitarian consequences of climate change do not constitute a major policy problem. Linked to this is the fact that the consequences of climate change for migration, although predictable in many cases, may not manifest themselves immediately. This may have fostered an impression that, if at all, climate change-related migration is a policy problem of the distant future.

Second, migration, and climate change-related migration even more so, is a truly cross-cutting phenomenon (Morton et al., 2008, p.5). This complexity means that no one policy community can claim exclusive ownership and drive it up the policy agenda. Furthermore, climate change-related migration raises difficult policy issues related to immigration, development, the environment and humanitarian assistance. Successful policy intervention in this area therefore requires policy coordination and a whole-of-government approach that can be difficult to engineer.

Third, with increased economic migration³ and a rise in the numbers of persons claiming refugee status in the 1990s, migration has increasingly been discussed in security terms (Story, 2005, p.4; Volger, 2002, p.188). In the context of a general 'securitisation trend', the movement of people across borders too has increasingly been seen as a 'security threat'. Similarly, climate change, via the potential of its consequences

to cause violent conflict, has also increasingly been framed in these terms (see, for example, Barnett and Adger, 2007; Brown et al., 2007; Matthew, 2008; Schubert et al., 2008). This may mean that the likelihood of migration being constructed as a positive policy solution in the climate change context may become subordinate to the 'high politics of security' (Brown et al., 2007, p.1154). In other words, migration is seen as part of the problem, not part of a solution. Yet it is beyond any doubt that migration has been an adaptation strategy in the face of environmental degradation and climate change adopted by individuals and sometimes whole communities for millennia (Brown, 2008, p.21).

Why now?

Scientific consensus is crystallising around a realisation that climate change, and more specifically anthropogenic climate change, is real and constitutes a near-term threat. Furthermore, there is a growing recognition that climate change and variability will exacerbate both the sudden and gradual environmental events and processes driving current patterns of migration and displacement. In 2009 the challenges before the international community have come firmly into the political and public consciousness, as the United Nations Climate Change Conference 2009 (COP15) in Copenhagen draws ever nearer. This meeting represents a critical milestone in the

efforts to deal with the dangers posed by climate change at national, regional and international level.

However, neither the human mobility implications of climate change nor its broader humanitarian consequences are acknowledged by the UNFCCC or its Kyoto Protocol. This omission is of great concern to the humanitarian community as migration and displacement triggered by climate change cannot be systematically considered and properly addressed by the international community unless they are duly acknowledged within the UNFCCC process.

While the text of the UNFCCC speaks to the mitigation of and adaptation to climate change, the idea that migration represents a potential adaptation strategy has not prominently featured in the context of the UNFCCC. Where adaptation is linked to a particular context, these typically relate to ecological adaptation or planning for adaptation (see UNFCCC, 2007, articles 2, 4(1)(e), 4(1)(b)). There are also few instances in climate change literature which discuss migration as a potential adaptation strategy (see Adger et al., 2007, p.736).⁴

Overall, there is a need for an explicit recognition of the human mobility and humanitarian consequences of climate change in the successor agreement to the Kyoto Protocol. Leaving stark implications of climate change for human mobility, affecting millions of people all over the world, out of the document that will be shaping and guiding the international response to climate change for the years to come would be a major gap. A window of opportunity now

exists to place the issue of human mobility and humanitarian consequences of climate change at the heart of the international policy debate, and we hope that the peoples of the South Pacific can be part of shaping this discussion.

Why the South Pacific region?

The South Pacific is not alone in facing climate change. It will affect all countries in some way at some time. But given the low elevation of many South Pacific states, and their exposure to changing ocean weather patterns, it is likely that this region will feel the effects of climate change before many others. In 2008 alone the region experienced a number of natural disasters of a kind likely to be exacerbated by climate

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change. For example, a devastating tropical cyclone (Gene) resulted in substantial damage to agriculture, infrastructure and utilities in Fiji, requiring the Fijian government to provide FJ\$1.7 million worth of food rations.⁵ Unusually high sea levels and swells have resulted in displacement of persons in Kiribati, Solomon Islands, the Marshall Islands and the Federated States of Micronesia (OCHA, 2008). Salt water intrusion into field and crops and contamination of freshwater aquifers has been reported in Solomon Islands (Webb, 2008, p.3). Low-lying atoll states such as Kiribati and Tuvalu are projected, at a certain threshold level of climate change, to face the risk of being completely overcome by the sea or otherwise rendered uninhabitable.

Some states which see their territory threatened by climate change and consequent sea-level rise are currently exploring the possibility of purchasing land in other states as a potential long-term solution for their populations. With regard to migration, some countries within the region are likely to produce some demand for migration to New Zealand. Indeed, we can already see examples within the region of communities migrating internally to avoid complete inundation by rising sea levels, such as the relocation of 2,600 islanders from the low-lying Carteret Islands to Bougainville, Papua New Guinea (Perry, 2006). These and other population movements in the Federated States of Micronesia and in Vanuatu all point towards a future where migration may become an unavoidable response to climate change for households, communities and even entire nations.

The South Pacific region, therefore, is in the vanguard of regions already having to grapple with the human mobility consequences of adverse events and processes which, if not already caused by climate change, are likely to be exacerbated by climate change in the coming years, as indicated by the IPCC in its Fourth Assessment Report in 2007. Importantly, this cannot be simply dismissed as 'bad luck' due to the 'accident' of one's geographical location. Given the significant anthropogenic nature of current climate change and the inequities in carbon emissions which are at the root of this change, there exists a moral obligation on the part of the international community to face up to these challenges. We believe, therefore, that the time has come to firmly put the issue of migration and displacement at the heart of the debate around the policy responses to climate change. As a region, the South Pacific provides a suitable lens through which to examine wider policy issues raised by migration in the context of climate change.

Some key policy challenges

Understanding the potential scale and patterns of climate change-related migration

The numbers of persons predicted to be at risk of being displaced due to climate change-related environmental events and processes represents something of a wild card in this area. Quite simply, there is no scientifically verified estimate of projected population flows. 'Guesstimates' range from 50 million to 1 billion. The most commonly cited figure is of

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around 200 million persons displaced by climate change by 2050 (Brown, 2008, p.11, citing Myers, 1993). To put this in perspective, this figure equates to what the IOM currently estimates to be the total number of migrants worldwide.⁶ Some estimates have, like much of the climate change debate, a sensationalist element to them which can have negative effects on public and political opinion. This dearth of accurate statistical and substantive information on the possible migratory consequences of climate change impedes our ability to adequately prepare for and comprehensively respond to the humanitarian and protection needs of environmental migrants. The extent to which migration occurs in the coming decades will, in large measure, depend on which of the IPCC's emission scenarios (SRES) comes to pass. We need, as a first step, to obtain an accurate picture as to the potential scale and patterns of climate change-related migration.

It is likely that mass displacement will occur in many parts of the world as a result of sudden-onset events (e.g. storms, cyclones, flooding) made more intense or frequent (or both) as a result of climate change. However, an even greater number of people are likely to migrate because of slowonset processes, at both early and more advanced stages of environmental degradation (e.g. sea-level rise, coastal erosion, desertification, declining soil fertility). At early stages of environmental degradation, individuals and households may engage in temporary or circular forms of migration, such as seasonal, rural-urban migration. Where environmental degradation is more severe and/or irreversible, resulting migration can require relocation of affected populations either internally or to a third country and may become permanent. Climate change-related migration may take place internally, regionally or internationally. Most empirical research, however, suggests that internal migration, mainly as rural-urban migration, or cross-border movement between neighbouring countries, are likely to be the predominant patterns (see generally Leighton, 2007, 1998).

Key issues in this context include:

- How many people will migrate and where?
- What migration patterns and volumes emerge in response to different environmental stressors?
- How can migration and environment datasets be enhanced and/or harmonised?
- · How can household surveys be better utilised?

Understanding the complexity and multicausality of climate change-related migration

As outlined above, migration decisions are influenced by social, economic and political factors, as well as individual characteristics such as age, gender, education, skills, risk-taking capacity, capacity to face new situations and the like. The extent to which environmental factors determine migration will depend on the underlying adaptive capacities of individuals, communities and countries.

There exists a need to better understand how people cope with the 'shocks and stresses' of climate change and climate variability, and, in particular, the extent to which migration forms part of the adaptation strategy (Kniveton et al., 2008, p.37). In this regard, it is important to note that there is a lack of contemporary empirical studies as to how perceptions of climate change have influenced migration decisions made by individuals, households and communities (ibid., p.33). It is clear, however, that the use of migration as an adaptation strategy is not open to everyone; it depends on resources, information and other social and personal factors. Often it is precisely the most vulnerable and the most severely affected who are not in a position to migrate.

More specifically, there may be differentiated gender impacts that must be expressly factored into the policymaking process. In general terms, women are expected to be particularly vulnerable to impacts of climate change as a result of existing gender inequalities which limit their access to information and decision-making power. This increased vulnerability is also a function of their frequently insecure property rights and access to resources, as well as of their reduced mobility due to caring for children and the elderly in situations of environmental stress (see generally IUCN, 2008, p.57; OHCHR, 2009; UNIFEM, 2008). Additionally, there are regionally specific gender implications (UNDP, 2008). In some Pacific communities (e.g. the Carterets in Papua New Guinea and some outer islands in Yap in the Federated States of Micronesia (cited by Cheryl Anderson in UNDP, 2008)), systems of land management and/or holding are matrilineal. Furthermore, women in the Pacific have traditionally engaged in collecting seafood within inshore areas. As a result, coastal erosion may affect women differently than men who are traditionally engaged more in deep-sea fishing. In each case, loss of land would have a potentially significant impact on families and communities as a whole, and on gender relations within these communities. It is, however, important not to see Pacific women only as victims of climate change. Women have significant roles in traditional methods of disaster risk reduction, and may also possess valuable knowledge about changes to their physical environment (see generally Campbell, 2006).

The impact of climate change is also likely to be particularly acute for many indigenous communities. Also often having limited access to information and decision-making power, indigenous communities are particularly vulnerable due to their inhabiting of marginal land and reliance on ecosystems and ecosystem services that are susceptible to climate change. There may be disruption to systems of traditional knowledge. For example, in some parts of Solomon Islands livelihoods are already beginning to be

affected by changes to wind patterns which are disrupting traditional sources of knowledge around crop planting (ICRC, 2008). Displacement away from traditional places of settlement may involve significant heritage and cultural loss, creating a profound sense of alienation and trauma.

Key issues in this context include:

- What are the causal links between migration, environmental events and processes and climate change and to what extent is the environment the primary driver?
- How do climatic and environmental drivers interact with social, political and economic motivations for migration?
- What are the gendered impacts of climate change and how do they affect migration?
- What may be the impact of climate change on indigenous persons and communities?

Managing climate change-related migration

In view of the variegated and complex challenges at hand, migration management responses to impacts of climate change and environmental degradation on migration and displacement must operate on several tracks. Firstly, given the environmental scenarios expected to arise with climate change in the future, the effectiveness of humanitarian response mechanisms to displacement and its negative impacts needs to be reinforced as much as possible. In addition to that, proactive approaches, in terms of preparedness and disaster risk reduction, must become a priority.

Secondly, while migration is still predominantly seen as a worst-case scenario, and there are indubitably cases where this holds true, migration should also be recognised as an adaption strategy. In fact, attempts to stem migration at all cost may increase rather than decrease people's vulnerability to environmental pressures. If it is accepted that migration is a coping strategy adopted by at least some persons or communities in the face of environmental degradation, it is in our view at least open to serious debate as to whether migration, in the context of climate change, should be characterised as solely a failure of adaptation. Whether this is so will depend largely on the point at which migration takes place in relation to the underlying environmental event or process, and what other non-migratory options (if any) are available. Regardless, there is room to increase the adaptive capacities of individuals, households and communities. Appropriate policies are needed to facilitate migration as an

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adaptation in and of itself, while simultaneously trying to limit instances of forced migration. The role of sustainable development is crucial in this equation. The developmental basis of communities and countries is decisive for any national or regional policies on adaptation to climate change (including the National Adaptation Programme of Action created within the UNFCCC process) and on migration. Migration itself can be mobilised as an adaptation or development strategy, for example where migrant remittances contribute to income diversification for households otherwise relying on diminishing ecosystem services.

More globally, other questions that arise in this context include whether potential risk linked to climate change becomes a factor in national-level migration policy making. If so, what weight should it be given? Can seasonal or other time-bound policies be implemented? Would this be effective considering the long timeframe needed to reverse climatic processes such as desertification and sea-level rise?

Key issues in this context include:

· What policies and initiatives currently exist to address

internal and international migration, from prevention and mitigation policies to return and reintegration?

- What lessons can be learned from existing government responses?
- How can we reduce vulnerability to disaster-induced displacement?
- How can migration be used as part of adaptation strategies?
- How can capacity be built to implement such policies?

Finding workable definitions and solutions under international law

As noted in the introduction, people migrating for environmental reasons do not fall squarely within any one category of 'forced' or 'voluntary' migration, and as such, they also do not fit neatly into the categories provided by the existing international legal framework. Terms such as 'environmental refugee' (El-Hinnawi, 1985, p.4) or 'climate change refugee' have gained much popular currency, but do not have any legal basis in international refugee law.7 Moreover, there is consensus among concerned agencies, including the Office of the United Nations High Commissioner for Refugees (UNHCR), that their use is to be avoided as these terms are misleading and could potentially undermine the international legal regime for the protection of convention refugees (IOM, 2009, pp.4-5; UNHCR, 2008, p.7).8 It is largely for this reason that the IOM proposes the working definition of 'environmental migrants'.

Definitions matter as they determine entitlement to rights and establish the threshold for accessing any protection regime (Dun and Gemenne, 2008, p.11). Should protection be limited to situations of forced migration or displacement? But given the complexity of the task of deciding, hard and fast, what constitutes 'forced migration' in the context of climate change, is this realistic and practicable, or will it inevitably leave many without rights and protection?

The situation of those migrating or displaced due to environmental factors raises significant and complex issues of international law. Particular challenges arise in the context of shrinking or disappearing states — a phenomenon predicted under some scenarios to manifest in the South Pacific. The following are but a few examples of the existing international legal concepts and instruments and some associated problems which may provide guidance to policy makers:

Human rights. There is little doubt that climate change events and processes will have an impact on human rights in different ways (see generally OHCHR, 2009 and International Council on Human Rights Policy, 2008). Respect for human rights must be an integral part of any policy response to the migration and displacement consequences of climate change, no matter how the motivations for movement are defined. The work of treaty-monitoring bodies has meant that the content of the civil and political, and economic, social and cultural rights recognised under binding multilateral treaties is better understood and an expanding set of standards has been developed to guide rights-sensitive policy making. The potential for existing international human rights,

humanitarian and/or refugee law to offer protection to the rights of those migrating or displaced due to climate change needs to be fully explored.

Statelessness. The international law regime on statelessness⁹ is designed to deal with issues of deprivation of nationality following state succession or conflict of nationality law. It has not been designed to deal with questions arising where no successor state exists and the predecessor state has disappeared, as may occur in relation to some small island states. In the context of climate change, does the law require that all or just the habitable parts of the territory disappear?¹⁰ If these states are declared to continue to exist in some legal sense, their populations will not be de jure stateless, to which the international regime largely responds. Their lack of an effective nationality means they may well be considered de facto stateless persons, for whom the protection regime is weaker.

Self-determination. Complete loss of territory will have a significant impact on the rights of the affected peoples to self-determination,¹¹ which has internal and external aspects (Joseph et al., 2004, p.146; Nowak, 1993, p.22). The internal aspects relate to freedom to pursue economic, social and cultural development, and include participation in political processes. The external aspects relate to freedom from foreign domination and the right of peoples to freely determine their political status and place in the international community. While some aspects of internal self-determination can be accommodated through the democratic process of the host country and its existing obligations under international human rights law, 12 how will these rights survive in full with the complete loss of territory without sovereignty being established over other territory? Similarly, how can displaced peoples exercise their right to freely dispose of their natural resources, including maritime resources?¹³ Finally, cultural identity is intimately bound up with particular territory, the loss of which is likely to pose a challenge for the protection of cultural development.

Internal displacement. The Guiding Principles on Internal Displacement, although technically a non-binding, soft-law document, have been influential in shaping how states respond to the predicament of the internally displaced. ¹⁴ Importantly, the Guiding Principles have been one source of inspiration behind the Draft African Union Kampala Convention on Internally Displaced Persons, which shows how soft-law instruments can, in time, solidify into hard-law instruments. ¹⁵ 'Hard-law' policy instruments may be not be attractive to states, particularly when the potential scale of the obligations assumed is unknown. A 'soft-law track', following 'framework' and 'protocol' approach, may the most workable route to ensure the rights and protection of those migrating or displaced due to environmental factors.

Key issues in this context include:

- What rights do environmental migrants have? How can those migrating or displaced for environmental reasons be best protected?
- · What are the definitions and concepts needed and do

- they already exist under international law?
- What are the strengths and limitations of existing definitions under international law; how can they be improved?
- Does calling those displaced in this context 'refugees' weaken its currency or does a failure to do so weaken the case for their legitimate claims for protection?
- What is the role of hard-law versus soft-law instruments in this debate?

Conclusion

Having reviewed some of the critical issues, how best, then, to ensure effective and equitable responsibility-sharing in respect of climate change-related migration? One of the most significant obstacles that had to be overcome to secure the UNFCCC was the negotiations involved in reconciling divergent state interests (see Bodansky, 1993, pp.475-7). It seems clear from this experience that trying to create a global binding agreement may not be the best, or at the very least the most feasible, course. It must also be open to debate whether a regional approach is the best one in terms of reaching some international agreement on climate change-related migration. What, we ask, does 'region' mean in this context, and how might different actors within a region share responsibility for the issue? More fundamentally, given the truly global nature of climate change and the historical provenance of current greenhouse gas (GHG) emissions, is it appropriate or fair to take a regional approach? At the same time, it may be possible to draw upon existing regionally-situated arrangements of inter-communal and inter-island cooperation in the wake of natural disasters (see Campbell, 2006, p.23).

A fundamental issue to consider is whether it is desirable to frame this issue in such zero-sum terms. Would a hybrid model involving global, regional and, importantly, bilateral features perhaps be better suited? While the most effective burden-sharing arrangements are likely to occur at the regional level, the fact that all states will, to some extent, be affected by climate change means that, ideally, the agreement should also contain an element of global management. Also, the South Pacific states are not individually or collectively responsible for the current build-up of dangerous atmospheric GHG levels.

To conclude: it is, in our view, vitally important that in seeking to find policy solutions to an issue of global importance the bilateral dimension is not overlooked. It is individual states which, in the exercise of their own sovereign rights and taking into account historical, cultural and other ties, will have to decide the contours of their policy response to climate change-related migration. Bilateral state cooperation is an important feature of contemporary global migration management and must be enhanced in this particular context. Nevertheless, to be truly effective and equitable, such bilateral arrangements must be informed and guided by relevant regional and global arrangements and processes. In particular, they must be guided by the UNFCCC and a successor agreement to the Kyoto Protocol, in which we hope to see the human mobility

implications and humanitarian consequences of climate change expressly acknowledged, and which together will guide the overarching political approach and mechanisms for practical implementation of relevant programmes to assist the affected populations.

We believe that by disaggregating the issues of 'who goes where and when?' and 'who pays?' while aligning them in an interconnected and mutually-reinforcing series of global, regional and bilateral responses under the umbrella of the UNFCCC, it is possible to envisage responsibility-sharing arrangements with variable but broadly balanced commitments and responsibilities.

- 1 This article was originally drafted as a position paper and distributed to delegates at the Institute of Policy Studies conference 'Climate Change and Migration in the South Pacific Region: policy perspectives', held in Wellington on 9 and 10 July 2009. The opinions expressed in this article are those of the authors and do not necessarily reflect the views of the International Organization for Migration (IOM) and the IPS. The designations employed and the presentation of material do not imply the expression of any opinion whatsoever on the part of the IOM and IPS concerning the legal status of any country, territory, city or area, or of its authorities, or concerning its frontiers or boundaries. The authors wish to acknowledge with thanks Karoline Popp, associate migration officer; Patrice Quesada, associate expert; and Agatha S. Tan, intern, all at the International Dialogue on Migration Division at the IOM, for their helpful comments on earlier drafts of this article.
- 2 Displacement is defined as a forced removal of a person from his/her home or country, often due to armed conflict or natural disasters.
- 3 Economic migrants are defined as persons leaving their habitual place of residence to settle outside his/her country of origin in order to improve his/her quality of life (IOM, 2004, p.21).
- 4 In many other instances it is not acknowledged or explored in any detail. For example, discussing small island developing states, a recent report by the UNFCCC secretariat notes that the habitability and thus sovereignty of some states are threatened due to reduction in island size or complete inundation. However, this stark vulnerability is not separated out from other vulnerabilities of a lesser order of magnitude (UNFCCC, 2007, p.25). See also UNFCCC, 2007, p.42 noting that migration might result, but the profound policy issues raised are simply not dealt with.
- 5 \$1.7 million for tropical cyclone Gene rehabilitation (Relief Web: Fiji, 12 February 2008, http://www.reliefweb.int/rw/dbc.nsf/doc104?0penForm&rc=5&cc=fij).
- 6 See http://www.iom/it/jahia/Jahia/about-migration/facts-and-figures/global-estimates-and-trends.
- 7 Note, however, that there may be exceptional cases in which environmental factors combine with discriminatory modes of governance and constitute persecution. See here Burson (2008).
- 8 Furthermore, regional instruments such as the 1969 AU/OAU Convention Governing the Specific Aspects of Refugee Problems in Africa and the 1984 Cartagena Declaration on Refugees have expanded refugee definitions covering 'events seriously disturbing public order'. While they were not intended to cover displacement as a result of natural disasters per se (see, e.g., Epsiell at al., 1990, p.96; Cuellar et al., 1991, p.493; Muzenda, 1995, p.51), they may provide some impetus for further progressive regional interpretation of the refugee definition.
- 9 The primary international instruments are the 1930 Hague Convention, the 1954 Convention relating to the Status of Stateless Persons and the 1961 Convention on the Reduction of Statelessness. The principles underlying these instruments are supported by provisions in other treaties, such as the 1957 Convention on the Nationality of Married Women, the 1979 Convention on the Elimination of All Forms of Discrimination Against Women and the 1989 Convention on the Rights of the Child. See also the 1997 European Convention on Nationality.
- 10 The best-known formulation of the basic criteria for 'statehood' includes criteria such as the existence of a defined territory and a permanent population. See Crawford, 1979, p.36; Grant, 1999, p.5.
- 11 Article 1(1) of the ICCPR and ICESCR: 'all peoples have the right to freely determine their political status and freely pursue their economic, social and cultural development'.
- 12 In particular, the ICCPR and ICESCR
- 13 See article 1(2) of ICCPR and ICESCR. As Paskal (2007, p.5) asks, 'Does this require Tuvalu, for example, to tether a boat to its former island and keep a few people there to continue to claim these rights?'
- 14 E/CN.4/1998/53/Add.2: 'persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border'. This definition could foreseeably cover all those forcibly displaced within their country due to the effects of climate change.
- 15 Similarly, the Cartagena Declaration was the product of a colloquium attended by experts and representatives from 10 Central American governments and, although strictly nonbinding, it has been influential in setting policy in the region.

References

- Adger, W.N. et al. (2007) 'Assessment of adaptation practices, options, constraints and capacity', in M.L. Parry et al. (eds), Climate Change 2007: impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge, UK: Cambridge University Press
- Barnett, J. and N. Adger (2007) 'Climate change, human security and violent conflict', *Political Geography*, 26 (6), pp.639-55
- BBC News (2008) 'Plan for new Maldives homeland', 28 November, http://news.bbc.co.uk/2/hi/south_asia/7719501.stm
- Brown, O. (2008) *Migration and Climate Change,* migration research series, 31,
 Geneva: IOM
- Brown, O., A. Hammill and R. McLeman (2007) 'Climate change as the "new" security threat: implications for Africa', Foreign Affairs, 83 (6), pp.1141-54
- Burson, B. (2008) 'Environmentally induced displacement and the 1951 refugee convention: pathways to recognition', in proceedings of conference on 'Environment Forced Migration and Social Vulnerability', United Nations University and IOM, Bonn, October, forthcoming
- Campbell, J. (2006) *Traditional Disaster*Reduction in Pacific Island Communities,
 GNS science report 2006/038
- Crawford, J. (1979) *Creation of States in International Law,* Oxford: Clarendon Press
- Cuellar, R., D. Garcia-Sayan, J. Montano, M. Diegues and L.V. Lanza (1991) 'Refugee and related developments in Latin America: challenges ahead', *International Journal of Refugee Law*, 3 (3), pp.482-501
- Dun, O. and F. Gemenne (2008) 'Defining "environmental migration"', Forced Migration Review, 31
- Espiell, H.G., S. Picardo and L.V. Lanza (1990)

 'Principles and criteria for the protection
 of and assistance to Central American
 refugees, returnees and displaced persons
 in Latin America', *International Journal of*Refugee Law, 2 (1), p.117
- El-Hinnawi, E. (1985) *Environmental Refugees,*Nairobi: United Nations Environment
 Programme
- Grant, T. (1999) The Recognition of States:

 law and practice in debate and evolution,
 Westport: Greenwood Publishing
- ICRC (2008) Pacific Red Cross Societies:

 preparing for climate change, Pacific

 Delegation International Federation of Red
 Cross and Red Crescent Societies
- International Council on Human Rights Policy (2008) Climate Change and Human Rights: a rough guide, Geneva
- IOM (2004) International Migration Law: glossary on migration, Geneva: IOM

- IOM (2007) 'Discussion note: migration and the environment', background paper to the 94th IOM conference, MC/INF/288, http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/microsites/IDM/workshops/evolving_global_economy_2728112007/MC_INF_288_EN.pdf
- IOM (2008) World Migration Report 2008: managing labour mobility in the evolving global economy, Geneva: IOM
- IOM (2009) 'Migration, climate change, and the environment', policy brief, Geneva: IOM
- IOM, UNHCR and RPG (1996) Environmentallyinduced Dopulation Displacements and Environmental Impacts Resulting from Mass Migrations, symposium report, Geneva: IOM
- IPCC (1990) Impacts Assessment of Climate Change: report of working group II, IPCC First Assessment Report, volume 2, Canberra: Australian Government Publishing Service
- IPCC (2000) Special Report: emissions scenarios, http://www.ipcc.ch/pdf/specialreports/spm/sres-en.pdf
- IUCN (2008) Indigenous and Traditional Peoples and Climate Change, issues paper, March
- Joseph, S., J. Schultz and M. Castan (2004) The International Covenant on Civil and Political Rights: cases materials and commentary, Oxford: Oxford University Press
- Kliot, N. (2004) 'Environmentally induced population movements: their complex sources and consequences', in J.D. Unruh, M.S. Krol and N. Kliot (eds), Environmental Change and its Implications for Population Movement, Dortrecht: Kluwer
- Kniveton, D., K. Schmidt-Verkerk, C. Smith and R. Black (2008) Climate Change and Migration: improving methodologies to estimate flows, migration research series 33. Geneva: IOM
- Leighton, M. (2007) 'Desertification +
 migration = security?', in the Proceedings
 of the Desertification and Security
 Conference, German Federal Foreign
 Ministry of Economic Cooperation and
 Development
- Leighton, M. (1998) Opportunities for Addressing Interrelated Problems of Dryland Desertification, Biodiversity Loss, and Climate Change, Dakar: Global Biodiversity Forum, IUCN
- Matthew, R. (2008) Resource Scarcity: responding to the security challenge, New York: International Peace Institute
- Morton, A., P. Boncour and F. Laczko (2008) 'Human security policy challenges, *Forced Migration Review*, 31
- Muzenda, T.N. (1995) 'The role of social and economic factors and natural disasters in forced population displacements in Africa',

- International Journal of Refugee Law, special issue, July, pp.46-54
- Myers, N. (1993) 'Environmental refugees in a globally warmed world: estimating the scope of what could well become a prominent international phenomenon', *Bioscience*, 43 (1), pp.752-61
- Nowak, M. (1993) *U.N. Covenant on Civil and Political Rights: CCPR commentary,* Kehl am Rhein: N.P Engel
- OCHA (2008) Pacific Islands: abnormally high sea levels, situation report 1, United Nations Office for the Coordination of Humanitarian Affairs
- OHCHR (2009) Report of the United Nations High Commissioner for Human Rights on the Relationship Between Human Rights and Climate Change, UN Doc. A/ HRC/10/61, 15 January
- Paskal, C. (2007) How Climate Change is Pushing the Boundaries of Security and Foreign Policy, briefing paper 07/01, London: Chatham House
- Perry, R.L. (2006) 'Drowning worlds', *The Times*, 21 December, http://www.timesonline.co.uk/tol/news/world/article759319.ece
- Schubert, R. et al. (2008) 'Climate change as a security risk', in *Report of the German Advisory Council on Global Change*, London: Earthscan
- Stern, N. (2006) Review on the Economics of Climate Change, Cambridge: Cambridge University Press
- Story, B. (2005) Politics as Usual: the criminalization of asylum seekers in the United States, working paper 26, Oxford: Refugee Studies Centre, Oxford University
- UNDP (2008) The Gendered Dimensions of Disaster Risk Management and Adaptation to Climate Change: stories from the Pacific, Suva: UNDP Pacific Centre
- UNFCCC (2007) Climate Change: impacts, vulnerabilities and adaptation in developing Countries, Bonn: UNFCCC
- UNHCR (2008) Climate Change, Natural Disasters and Human Displacement: a UNHCR perspective, Geneva: UNHCR
- UNIFEM (2008) 'Contribution to request by United Nations High Commissioner for Human Rights for information on human rights and climate change'
- Volger, J. (2002) 'The European Union and the "securitisation" of the environment', in E.A. Page and M. Redclift (eds), *Human Security and the Environment*, Cheltenham: Edward Elgar
- Webb, J. (2008) Engaging Young People in the Solomon Islands for Red Cross Action on Climate Change, International Federation of Red Cross and Red Crescent Societies, October, www.climatecentre.org