

“THE SEA IS OUR VERY CLOSE NEIGHBOUR...”

SMALL ISLAND DEVELOPING STATES OF THE PACIFIC AND CLIMATE CHANGE: ADAPTATION AND ALTERNATIVES

*Ailsa Ceri Warnock**

The sea is our very close neighbour. In fact, on the island where I live, Funafuti, it is possible to throw a stone from the one side of the island to the other. Our islands are very low-lying. When a cyclone hits us there is no place to escape. We cannot climb any mountains or move away to take refuge. It is hard to describe the effects of a cyclonic storm surge when it washes right across our islands. I would not want to wish this experience on anyone. The devastation is beyond description... This concern is so serious for our people, that the cabinet, in which I am a member, has been exploring the possibility of buying land in a nearby country, in case we become refugees to the impacts of climate change.

Hon Teleke P Lauti (Tuvalu)¹

I. INTRODUCTION

Failing mitigation of greenhouse gas emissions, the phenomenon of climate change is predicted to cause sea levels to rise and variable climatic events, such as cyclones and the ensuing storm surges, to occur with increasing frequency and ferocity.² The international community has recognised the vulnerability of Small Island Developing States (“SIDS”) to such severe, adverse climatic changes and the States themselves have called for global assistance in building their islands’ resilience to climate change. Focusing upon the Small Island Developing States of the Pacific Region, this article considers whether efficacious adaptation is a realistic prospect or, alternatively, whether Pacific Islanders will be forced to leave their homelands in the face of such climatic ravages. If the abandonment of

* LLB (Hons), LLM (Auck), Barrister (England and Wales). Lecturer in Law, University of Otago, New Zealand. The author would like to thank Professor Catherine Redgwell for her kind comments on this article.

¹ Statement by the Hon Teleke P Lauti (Tuvalu) (November 2000) The Hague, Netherlands, COP 6 reprinted in *Climate Change: Small Island Developing States*, UNFCCC (2005) 13.

² See Intergovernmental Panel on Climate Change, Third Assessment Report, ‘Climate Change 2001: Synthesis Report’, 15, online: <<http://www.ipcc.ch/pub/reports.htm>> (last accessed on 10 September 2006) for an accessible summary of predicted changes of extreme climate phenomena during the 21st century.

national landmasses becomes a necessity, what legal measures should be put in place to manage the flow of 'climate change refugees'?

The case of the Small Island Developing States of the Pacific is considered for a number of reasons. The Pacific Islands are arguably the countries most at risk from climate change; they are amongst the poorest nations in the world; their peoples have been highly vocal in their calls for international assistance; and ultimately, they bear little responsibility for the havoc that is likely to be wreaked upon their lands.

Part II of this article sets out the background to the discussion by illustrating the vulnerability of the Pacific Islands to climate change. Part III considers adaptation within the context of the United Nations Framework Convention on Climate Change³ and its Kyoto Protocol.⁴ In particular, consideration is given to the prospects of Pacific Islands receiving sufficient funding to prepare adaptation mechanisms and whether such adaptation will be achieved within an appropriate timescale. The possibility of an 'Adaptation Protocol' emerging from the climate change negotiations is touched upon. The fourth part of this article looks at the alternative to adaptation, that is, abandonment of the islands. In the harsh light of cost-benefit analysis, will the expense of funding adaptation for Small Island Developing States of the Pacific become prohibitive and politically unjustifiable? This article argues that the international community should prepare, well in advance, for the prospective abandonment of the Pacific Islands and other SIDS. An exploration of existing multilateral, regional and bilateral agreements is made to consider whether there is scope for abandonment to be subsumed and managed within an existing regime. The conclusion is in the negative. Finally, in part V, the article looks at whether the climate change negotiations could and should encompass the logistics of abandonment.

Certain premises have been adopted. The first is that the phenomenon of climate change *is* occurring and will escalate in the coming century. Secondly, it is assumed that adaptation mechanisms will prove to be costly and require permanent funding. Thirdly, although there is little evidence of

³ *Framework Convention on Climate Change*, opened for signature 7 November 1990, 31 ILM (1992), 851 (entered into force 21 March 1994) (the "UNFCCC").

⁴ *Protocol to the Framework Convention on Climate Change (Kyoto)*, opened for signature 16 March 1998, 37 ILM (1998), 22 (entered into force 16 February 2005) (the "Kyoto Protocol"). The UNFCCC, its Kyoto Protocol and the global negotiations taking place within this framework shall be hereafter referred to as the "climate change regime".

mass migration as a result of climate change at present,⁵ this is a realistic possibility for the future. This article should be read with these factors in mind.

II. THE SMALL ISLAND DEVELOPING STATES OF THE PACIFIC

There are many thousands of small islands in the Pacific region. However, 22 of those islands are recognised as ‘Small Island Developing States of the Asia-Pacific Region’ by the United Nations system.⁶ Those SIDS situated in the Pacific that have independent governments include Fiji, Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.⁷ This article is concerned with this list of specified States.

The Pacific SIDS are extremely vulnerable to the potential effects of climate change.⁸ In the main, the islands’ terrain consists of low-lying coral and / or limestone and sand atolls.⁹ The highest point on Tuvalu, for example, is three metres above sea level.¹⁰ A number of the islands have rugged, mountainous interiors.¹¹ The Pacific Islands are already affected by extreme weather events such as tropical storms, cyclones and hurricanes, and according to the United Nations Framework Convention on Climate Change (“UNFCCC”) Secretariat, “droughts and flooding are also features of their weather pattern”.¹² The Intergovernmental Panel on Climate Change (“IPCC”) predicts that during the 21st century variable climatic events, such as cyclones, will increase in severity and frequency and droughts and floods associated with El Nino events will intensify.¹³ As early as 1988, academics such as Pernetta identified the extreme

⁵ See Richard Black, ‘Environmental Refugees: Myth or Reality?’, UNHCR Working Paper Number 34 (2001), online: <<http://www.unhcr.org/research/RESEARCH/3ae6a0d00.pdf>> (last accessed on 10 September 2006).

⁶ See The UN Small Island Developing States Network, ‘List of Small Island Developing States’, online: <http://sidsnet.org/sids_list.html> (last accessed on 10 September 2006).

⁷ Ibid.

⁸ Climate Change Secretariat (UNFCCC), *Climate Change: Small Island Developing States* (UNFCCC, 2005) 2, 13-23.

⁹ Ibid.

¹⁰ See UNFCCC, ‘Tuvula Initial National Communication Under the UNFCCC’ (1999), online: <<http://unfccc.int/resource/docs/natc/tuvnc1.pdf>> (last accessed on 10 September 2006).

¹¹ Samoa, Fiji, Federated States of Micronesia, Palau, Solomon Islands and Vanuatu.

¹² Climate Change Secretariat, above n 8, 5.

¹³ See Intergovernmental Panel on Climate Change, above n 2, for an accessible summary of predicted changes of extreme climate phenomena during the 21st century.

vulnerability of the Pacific Islands to climate change and sea level rise. In particular, he noted that Tuvalu, the Marshall Islands and Kiribati were susceptible to total submersion and other islands such as Tonga, Nauru and the Federated States of Micronesia would suffer “major population displacement”.¹⁴

By 2001, the IPCC had projected a sea level rise of 0.09 to 0.88 of a metre between the years 1990 to 2100.¹⁵ Although sea level rise will vary across the planet, the IPCC predicted that the Pacific region, in particular, may experience a greater increase than the global average.¹⁶ Clearly, the terrain of the Pacific SIDS makes them especially vulnerable to any degree of sea level rise, but a rise in the region of one metre would be disastrous for the low-lying islands. The focus of island life centres on the coast. People live on the coast. The sea provides the main source of employment, income and food for the citizens of the Pacific SIDS and as a consequence, most of the infrastructure is near the coast.¹⁷ Due to the density of the population in many of the islands, coupled with the inhospitable, rugged mountainous terrain of the interiors, the prospect of moving inland is not a serious option.¹⁸

However, the Pacific SIDS are vulnerable to sea level rise not simply because of their particular geological features. There can be little doubt that an ability to adapt to the deleterious effects of climate change is a function of wealth, technology, information, skills and infrastructure and by definition, developing States lack these advantages.¹⁹ Further, a number of Pacific Island States are classified as ‘Least Developed Countries’

¹⁴ J Pernetta, ‘Potential Impacts of Greenhouse Gas Generated Climate Change and Projected Sea Level Rise on Pacific Island States of the SPREP Region’ in J C Pernetta (ed), *Projected Sea level Rise and Climate Change: A Relative Impact Rating for Countries in the Pacific Basin*, 1–10, cited in Intergovernmental Panel on Climate Change, *Special Report on The Regional Impacts of Climate Change: An Assessment of Vulnerability*, (IPCC Geneva, 1997) chapter 9.

¹⁵ Intergovernmental Panel on Climate Change, above n 2, chapter 11.

¹⁶ Climate Change Secretariat, above n 8, 15.

¹⁷ Ibid 13–23.

¹⁸ See Intergovernmental Panel on Climate Change, Third assessment Report, ‘Climate Change 2001: Impacts, Adaptation and Vulnerability’, para 17.2.2.1, online: <<http://ipcc.ch/pub/reports.htm>> (last accessed on 10 September 2006).

¹⁹ See for example, Antonio Queface, ‘Vulnerability to the effects of extreme weather events in Mozambique’ (Paper presented at the UNFCCC Workshop on Adaptation, Bonn, 18 June 2004), online: <http://unfccc.int/files/meetings/workshops/other_meetings/application/pdf.queface.pdf> (last accessed on 10 September 2006).

within the United Nations system.²⁰ These are Tuvalu, Kiribati, Samoa, the Solomon Islands and Vanuatu. It is a sorry coincidence that some of the islands potentially most at risk from the effects of climate change, are also the poorest. Accordingly, such islands will experience particular difficulties in preparing adaptive measures to counter climate change risks. In the absence of adaptive measures on the islands, adverse climatic conditions may cause, *inter alia*:²¹

- Erosion of the coastline (if sand and coral formation is unable to match the rapidity of the erosion);
- Increased flooding and storm damage in low-lying coastal areas as episodic storm surges and destructive waves penetrate further inland;
- Wetland colonisation of low-lying uplands;
- An increase in the risks to health as a result (incidents of malaria and cholera may proliferate);
- Damage to agricultural systems and, as a consequence, income stability. 'Coral bleaching' also adversely affects that fish population within atolls; islanders depend upon fish not only for income but for the bulk of their protein intake;
- Potential loss of life;
- Difficulty in obtaining insurance. The inherent geographical vulnerability of the Pacific Island States, taken in conjunction with climate change, renders insurance unavailable or prohibitively expensive. As a result (and in the absence of international aid) natural disasters have the capacity to permanently cripple economies;
- Increased salinity in aquifers and as a result, scarcity of fresh water;
- Damage to buildings and other coastal infrastructure;
- Potential damage to waste landfills. Pollutants in the landfill may migrate because of flooding and water table changes;

²⁰ See UN, 'List of Least Developed Countries' and criteria for inclusion on the list, online: <<http://www.un.org/special-rep/ohrlls/ldc/list.htm>> (last accessed on 10 September 2006).

²¹ See A U Ahmed, 'Adaptation to Climate Change in Bangladesh: Learning by Doing' (Paper presented at the UNFCCC Workshop on Adaptation, Bonn, 18 June 2004), online: <http://unfccc.int/files/meetings/workshops/other_meetings/application/pdf/ahsan.pdf> (last accessed on 10 September 2006); J E Neumann et al, *Sea Level Rise and Global Climate Change* (Pew Centre on Global Climate Change, 2000) 3; Climate Change Secretariat, above n 8.

- An increase in the density of the population in areas of higher ground; this may place additional stresses on environmental resources; and
- Permanent inundation.

In August 2000, the United Nations held a Ministerial Conference on the Environment and Development in Asia and the Pacific in Japan. A particular focus of the Conference was the likely effects of climate change upon the SIDS of the Pacific. The Conference acknowledged that, failing effective mitigation of greenhouse gas emissions, the options for the Pacific Islands included adaptation measures such as “foreshore stabilisation” but also “resettlement and migration”. The Ministers concluded that, “these options need planning as they have policy implications”.²² In light of these conclusions, it is appropriate to first consider the prospects of the Pacific Islands adapting to climate change.

III. ADAPTATION

A. *Commitments to Adaptation Contained in the Framework Convention on Climate Change and its Kyoto Protocol*

The UNFCCC encompasses a two-pronged approach to climate change: mitigation of greenhouse gas emissions and adaptation to the adverse effects of climate change. The UNFCCC is premised on the expectation that climate change *will* occur and that accordingly adaptation, to some extent, will be necessary. The ‘objectives’ of the UNFCCC, contained within article 2, make reference to this. The aim of the Convention is to:

achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. *Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change...*

Although the object of the UNFCCC is to slow down climate change to such an extent that adaptation can occur *naturally* so as to “ensure that food production is not threatened and to enable economic development to

²² See UN Economic and Social Commission for Asia and the Pacific, Ministerial Conference on Environment and Development in Asia and the Pacific (Kitakyushu, 31 August-5 September 2000): ‘Forum on Climate Change and the Pacific Islands’, online: <<http://unescap.org/mced2000/pacific/background/climate.htm>> (last accessed on 10 September 2006).

proceed in a sustainable manner”, it is clear that the ensuing text of the Convention expects parties to co-operate in implementing man-made adaptations to climate change. This concept of adaptation is included within the UNFCCC at various points, for example (my emphasis):

Article 4 Commitment

1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstance, shall,

....

(b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by source and removals by sinks of all greenhouse gases not controlled by the Montreal protocol, *and measures to facilitate adequate adaptation to climate change.*

....

(e) *Co-operate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods.*

(f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimising adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate *or to adapt to climate change.*

....

4. *The developed country Parties and other developed Parties included in annex II shall also assist the developing country Parties that are particularly vulnerable to the adverse affects of climate change in meeting the costs of adaptation of those adverse effects.*

....

8. *In the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and / or the impact of the implementation of response measures, especially on:*

(a) Small island countries;

(b) Countries with low-lying coastal areas;

....

(d) Countries with areas prone to national disasters ...

....

Further, the Conference of the Parties may take actions as appropriate, with respect to this paragraph.

Most of the SIDS of the Pacific meet all three of the criteria in article 4.8 and therefore, pursuant to the UNFCCC, their adaptation needs should be prioritised.²³

The Kyoto Protocol to the UNFCCC, whilst not expanding the parties' commitments to adaptation, provides more specific guidance in article 10(b)(i) in stating that "adaptation technologies and methods for improving spatial planning would improve adaptation to climate change".

B. The Processes and Progress of Adaptation

Whilst international efforts have concentrated on developing a coherent legal regime for mitigation, such a regime has yet to emerge for adaptation.²⁴ Progress in relation to the adaptation provisions of the UNFCCC has been hindered by "lack of agreement about the meaning, scope and timing of adaptation; limited capacity in developing countries to undertake vulnerability assessments and planning; and bottlenecks in the availability of funding".²⁵ Although parties to the UNFCCC were to develop national, regional and international adaptation mechanisms

²³ At the date of writing (September 2005), the following Pacific SIDS were party to the UNFCCC: Kiribati, the Marshall Islands, Niue, Samoa, Togo, Vanuatu, the Cook Islands, Fiji, the Federated States of Micronesia, Palau, Tonga, Nauru, Solomon Islands, Tuvalu, and Vanuatu.

²⁴ See Ian Burton, 'Moving Forward on Adaptation: A Big Challenge and Many Opportunities' (Paper presented at the UNFCCC Adaptation Workshop, Bonn, 21 May 2005) online: <<http://www.unfccc.int>> (last accessed on 10 September 2006).

²⁵ Farhana Yamin and Joanna Depledge, *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures* (Cambridge University Press, 2004) 213.

alongside schemes for mitigation,²⁶ the Convention does not give any guidance as to timing with regards to adaptation and, of course, does not contain specific, mandatory provisions in this regard.

In 1994, a Global Conference took place in Barbados to consider the sustainable development of SIDS in line with Agenda 21 and the Rio Declaration on Environment and Development.²⁷ The Conference listed climate change and sea level rise as an area of priority in the resulting Barbados Programme of Action.²⁸ Various reviews of the Barbados Programme of Action have emphasised the importance of adaptation to climate change and rising sea levels.²⁹ However, it was only following the eighth Conference of the Parties (COP) in 2002³⁰ and the adoption of the Marrakesh Accords³¹ that the importance of adaptation has been reiterated within the climate change regime. In particular, the COP recognised that greater efforts must be made to ensure the assessment of countries' vulnerability to climate change. Such assessments provide the basis for developing adaptation methods and are therefore the necessary first stage in the process towards adaptation. The COP agreed that, to assist developing countries, a simplified methodology³² would suffice in respect of national vulnerability assessments and guidance in relation to this has

²⁶ As suggested by the juxtaposition of mitigation and adaptation in the text of the Convention.

²⁷ Agenda 21 is available on line at <<http://www.un.org/esa/sustdev/documents/agenda21/index.htm>> (last accessed 7 June 2007); for the Rio Declaration see UN General Assembly, *Declaration of the UN Conference on Environment and Development (Rio)*, UN Doc A/CONF.151/26/Rev.1 (1992).

²⁸ See UN, *Report of the Global Conference on the Sustainable Development of Small Island Developing States* (Bridgetown, Barbados, 1994) UN Publication E 94.I.18, online: <<http://www.un.org/documents/ga/conf167/aconf167-9.htm>> (last accessed on 10 September 2006).

²⁹ For example, see *Report of the United Nations General Assembly, 22nd special sess*, UN Doc A/S-22/2, online: <<http://daccessdds.un.org/doc/UNDOC/GEN/N99/271/89/PDF/N9927189.pdf?OpenElement>> (last accessed on 10 September 2006); UNGA, *International Meeting to Review the Implementation of the Programme of Action of the Sustainable Development of SIDS*, UN Doc A/CONF/207.L.6 (Mauritius, 10-14 January 2005).

³⁰ Conference Of the Parties, Eighth Conference report, "Part II: Action Taken", Doc FCCC/CP/2002/7/Add.1-3 (New Delhi, 2002).

³¹ Conference of the Parties, 2001, Seventh Conference, *Marrakesh Accords*, Doc FCCC/CP/2001/13/Add.4 Decision 28/CP.7.

³² *Ibid.*

been incorporated into the Marrakesh Accords.³³ Despite this, the resources and skills necessary to prepare such assessments are beyond the capacities of many Pacific Islands and international assistance is required.

The Global Environment Facility (GEF) is the entity that provides the financial mechanism for the UNFCCC.³⁴ As a consequence, the GEF has assisted a number of developing nations, including Tuvalu, in preparing the initial national communication³⁵ and is providing some assistance with subsequent vulnerability assessments. There are difficulties with and limits to GEF funding however and these are considered below. There are no other formal multilateral agreements for the regulated provision of assistance in assessing vulnerability.³⁶ Accordingly, any additional international assistance is ad hoc and generally channelled, on a regional and bilateral level, through national donor aid programmes.

The Pacific SIDS have attracted a degree of international donor aid to assist with this process. In the main, the focus of this aid has been upon establishing and beginning to put into operation more effective monitoring mechanisms to gauge vulnerability to climate change. By way of example, the Australian Government, in conjunction with the Australian National Tidal Facility at Flinders University, sponsored the South Pacific Sea Level and Climate Monitoring Project in Tuvalu.³⁷ This project installed a monitoring station at Funafuti in 1993 to monitor sea levels around the atoll. The Government of the United States of America, through the National Oceanic and Atmospheric Administration, is also assisting by providing in particular “capacity building amongst meteorologists in the region to improve predictions and related climate change risk management and adaptation strategic planning”.³⁸

³³ Initially vulnerability assessments were to be part of the requisite “national communications”: see UNFCCC, 31 ILM (1992) 851, Article 4 Commitments. Following the Marrakesh Accords a simplified procedure has been adopted in relations to LDCs. Vulnerability Assessments, or NAPAs can be stand-alone documents, based on a simplified methodology: see Yamin and Depledge, above n 25, 237.

³⁴ The financial mechanism for the UNFCCC is established by article 11 of the Convention.

³⁵ See UNFCCC, above n 10, 2: “Acknowledgement”.

³⁶ Provision for bilateral or multilateral financial assistance is suggested by UNFCCC, art 11.5.

³⁷ For detailed information see Flinders University, Australia, online: <http://www.bom.govt.au/pacificsealevel/project_info.shtml> (last accessed on 10 September 2006).

³⁸ See Ambassador West, Deputy Assistant Secretary of State for Oceans and Fisheries, ‘Statement before the Subcommittee on East Asia and the Pacific’ (Washington, 23 July

In summary, many SIDS in the Pacific region are only at the beginning of the process of gathering the detailed scientific evidence required by the rules of the COP and have accordingly, to date, been unable to prepare any comprehensive vulnerability assessments.³⁹ To reiterate, vulnerability assessments are only the first stage in the process for adaptation.⁴⁰ In accordance with rules developed by the climate change regime, the facilitation of adequate adaptation is dependent firstly upon countries having completed vulnerability assessments, and secondly, having undertaken the requisite capacity building.⁴¹ It is concerning that some 13 years after the adoption of the UNFCCC this first stage has still not been reached.

C. Towards an Adaptation Protocol?

Negotiations and rule development, in relation to adaptation, is continuing in a somewhat piecemeal fashion within the various bodies and mechanisms of the climate change regime. For example, the GEF is in the process of preparing a comprehensive adaptation strategy.⁴² The Subsidiary Body for Scientific and Technological Advice to the UNFCCC (SBSTA), agreed at the 18th SBSTA Conference in 2003, to add two new items to the agenda for consideration at SBSTA 20. One of these items concerned “the scientific, technical and socio-economic aspects of impacts of vulnerability and adaptation to climate change”.⁴³ Importantly, at SBSTA 22, held in May 2005, the Subsidiary Body agreed to formulate a five-year plan on adaptation. To an extent, the success of this multiplicity of approach is hindered by the lack of an overreaching instrument to

2003), online: <<http://www.state.gov/g/oes/rls/rm/2002/12159.htm>> (last accessed on 10 September 2006).

³⁹ UNFCCC, Review of the implementation of commitments and of other provisions of the Convention Financial Mechanism. Report of the Global Environment Facility. Note by the secretariat. Doc FCCC/CP/2002/4, para 13, online: <<http://www.unfccc.int/documentation/documents/items/3595.php#beg>> (last accessed on 10 September 2006).

⁴⁰ COP 1 (1995) Decision 11/CP.1, para 1(d)(iii) available online at <<http://unfccc.int/resource/docs/cop1/07a01.pdf#page=34>> (last accessed on 10 September 2006).

⁴¹ For a full explanation of the processes linked to the stages of adaptation required for GEF funding, see Yamin and Depledge, above n 25, 236-241.

⁴² COP 9 (2003) Doc FCCC/CP/2003/3 available online at <<http://unfccc.int/resource/docs/cop9/03.pdf>> (last accessed on 10 September 2006).

⁴³ UNFCCC, Report of the Subsidiary Body for Scientific and Technological Advice on its eighteenth session, held at Bonn, from 4 to 13 June 2003, available online at <<http://www.unfccc.int/resources/docs/2003/sbsta/10.pdf>> (last accessed on 10 September 2006).

provide a common focus, set of definitions, baselines, principles and responsibilities.⁴⁴

In light of the importance of adaptation and the potential costs involved, a number of experts have called for the development of an adaptation protocol clearly delineating the ambit of 'adaptation' and the rights and responsibilities of all parties.⁴⁵ Burton, for instance, states that:⁴⁶

as long as adaptation remains poorly defined, and with no adequate measures of performance or ways of assessing progress, it cannot be expected to attract the serious attention of finance ministries and economic development agencies in any country. Do we need and what would be clear objectives for adaptation? Is the IPCC definition too broad or is it sufficient for your needs? Do we need an adaptation baseline or its equivalent? What about targets, funding and an Adaptation Development Mechanism, agreed measures for evaluation and a specific legal instrument?

Whilst an adaptation protocol appears to be the only pragmatic approach, such a proposal has not found favour with all States parties. The delay and costs inherent in negotiating a new legal instrument have led SIDS to exercise caution over calls for an adaptation protocol.⁴⁷ The concern may also be that to focus on adaptation will take the focus off mitigation. Further, it is unlikely that many developed States would wish to be tied into an adaptation protocol, particularly when the costs of adaptation are long term and as yet, unquantifiable. One of the difficulties facing negotiators is the fact that the range of activities that could constitute adaptation mechanisms is extremely wide.⁴⁸ What does or does not constitute an adaptive mechanism is likely to prove highly contentious

⁴⁴ Such as the Kyoto Protocol provides in relation to mitigation.

⁴⁵ See for example "A Viable Global Framework for Preventing Dangerous Climate Change" CAN Discussion Paper, COP 9 (Milan, December 2003); H Ott *et al*, "South-North Dialogue on Equity in the Greenhouse: A Proposal for Adequate and Equitable Global Climate Agreement" (Eschborn, 2004); S Barrett, *Environment and Statecraft: The Strategy of Environmental Treaty-Making* (Oxford University Press, 2003); Carlo C Jaeger, 'Climate Change: Combining Mitigation and Adaptation' in D Michel (ed), *Climate Policy for the 21st Century: Meeting the Long-Term Challenge of Global Warming* (Centre for Transatlantic Relations, 2003); all summarised in D Bodansky, *International Climate: Efforts Beyond 2012: A Survey of Approaches* (Pew Centre on Global Climate Change, 2004).

⁴⁶ Burton, above n 24, 10.

⁴⁷ Government of Tuvalu (2005) 'Seminar of Government Experts: Draft Future Actions Strategy – Tuvalu', Presentation made at the seminar of Government Experts, 16 – 17 May 2005, Bonn, Germany (copy on file with the author).

⁴⁸ This difficulty will inform the focus for the SBSTA five-year plan: above n 43.

with developing States calling for a broad interpretation and developed States arguing for the contrary. To complicate matters further, SIDS have argued that the principle of adaptation contains, of necessity, two limbs.⁴⁹ The first limb pertains to building national resistance and resilience to the adverse effects of climate change; the second, to restoring damage.

D. Adaptation Measures for Pacific SIDS

In the absence of vulnerability assessments, it is difficult to categorically determine the type and quantum of adaptation required by Pacific SIDS. However, experts have suggested that adaptation measures to resist sea level rise, cyclones and storm surges for instance, could take the form of “sea walls, anti flood levees and dikes, upstream dams, beach nourishment and other engineering defences, plus land-use planning to deflect human settlements away from at risk zones” and so on.⁵⁰ Simplistically, coastal zone management for Pacific Islands could fall into two camps.⁵¹ Firstly there are technological, engineered (including bio-engineered) solutions, such as building sea walls and anti flood levees for example. Secondly, there are planning or policy decisions, such as moving communities away from the coast and towards higher ground. There are problems inherent in both of these categories of solution for Pacific Island States.

The IPCC Third Assessment Report notes that, “in small islands where physical space is already scarce, adaptation measures such as retreat to higher ground and the use of building set-backs⁵² appears to have little practical reality”.⁵³ In Tuvalu, for instance, the concept of moving to higher ground is somewhat illusory. As stated above, the highest point of the island is only three metres above sea level, the island’s useable landmass is densely populated and the vast majority of infrastructure is positioned around the coast.⁵⁴ Thus, one of the most pragmatic solutions

⁴⁹ See submissions made by Tuvalu on behalf of SIDS, above n 47.

⁵⁰ See N Myers, ‘Environmental Refugees in a Globally Warmed World’ (1993) 43 *BioScience*, No 11, 752, 753.

⁵¹ Other measures, including compensatory and restorative schemes, will include “devising financial, administrative or legal techniques to transfer risks away from vulnerable communities and / or provide for collective loss sharing mechanisms”: see for example Yamin and Depledge, above n 25, 214.

⁵² ‘Set-backs’ could include, for instance, floodplains and coastal zones.

⁵³ IPCC, above n 18, para 17.2.2.1.

⁵⁴ See UNFCCC, above n 10.

may not be available to the citizens of Tuvalu or indeed, other Pacific Island States.

The costs of employing engineering or technological solutions to the problem are likely to run into many billions of dollars. Although figures are not readily available in respect of the Pacific Islands⁵⁵ one startling statistic, relating to Jamaica, gives some indication of the potential costs involved. To protect Jamaica's coastline from the impacts of a sea level rise of 1 metre is projected to cost (US) \$462 000 000 annually. This is assessed as equating to 19% of Jamaica's Gross Domestic Product.⁵⁶ Jamaica has a coastline of 895 kilometres.⁵⁷ This pales in comparison with the coastlines of Kiribati [1143 km], Vanuatu [2528 km] and the Solomon Islands [5313 km] for example.⁵⁸ It is trite to state that a long-term commitment to major costs will be required if developing countries are to effectively adapt to climate change.

E. Funding for Adaptation

As stated above, the GEF is the entity that provides the financial mechanism for the climate change regime and should, therefore, provide funding for adaptation measures.⁵⁹ Funding for the GEF is received from Annex II parties, that is, developed OECD member country parties to the UNFCCC.⁶⁰ However, there is a great deal of debate within the climate change negotiations about funding for adaptation.⁶¹ This is hardly surprising given the potential costs of adaptation. Bodansky notes that article 4.4 of the UNFCCC is incredibly vague; it makes no reference to the GEF thus leaving open the question as to whether funding was to be

⁵⁵ A criticism made by the IPCC, Third Assessment Report, 'Climate Change 2001: Impacts, Adaptation and Vulnerability' is that there has been little if any attempt to effectively quantify the costs of adaptation, cited in Yamin and Depledge above n 25, 216.

⁵⁶ Climate Change Secretariat, above n 8, 27.

⁵⁷ See Earthtrends Coastal and Marine Ecosystems Country Profiles, online: <http://earthtrends.wri.org/country_profiles/index.php?theme=1> (last accessed on 10 September 2006)

⁵⁸ Ibid.

⁵⁹ This can be via its subsidiary mechanisms, the 'Least Developed Countries Fund', the 'Special Climate Change Fund' and the 'Adaptation Fund' linked to the Kyoto Protocol's Clean Development Mechanism.

⁶⁰ For a comprehensive list, see UNFCCC, Annex II Parties, online: <http://www.unfccc.int/parties_and_observers/items/2704.php> (last accessed on 10 September 2006)

⁶¹ Yamin and Depledge, above n 25, 234.

via bilateral or other means, and the article uses the terminology “costs of adaptation” rather than the comprehensive term ‘*the costs of adaptation*’.⁶²

The Global Environment Facility has been awarding grants in respect of climate change activities for 14 years, since 1991. At the date of writing 1.8 billion (US) dollars has been provided directly through the auspices of the GEF and an additional amount of 9 billion dollars has been leveraged through co-financing from bilateral agencies, recipient countries and the private sector.⁶³ These sums are to cover all climate change activities, not simply adaptation.⁶⁴ It is interesting to compare this sum to the reported 10 billion US dollars that the US Government assessed as required to cover “immediate relief needs” in the wake of Hurricane Katrina’s devastation of New Orleans in August 2005.⁶⁵

It is clear that a significant increase in the donations paid into the GEF by developed countries will be required if developing and vulnerable nations, the Pacific Islands amongst them, are to adapt effectively to climate change. In the absence of mandatory rules governing contributions, how likely is it that sufficient donations will be forthcoming?⁶⁶ Would it ever be possible to agree a mandatory level of contributions? Could other mechanisms to garner resources, for example the levy affiliated to the Kyoto Protocol’s Clean Development Mechanism,⁶⁷ provide sufficient finances to fund a significant proportion of adaptation costs?⁶⁸

⁶² D Bodansky, ‘The United Nations Framework Convention on Climate Change: A Commentary’ (1993) 18(2) *Yale Journal of International Law*, 451-558 cited in Yamin and Depledge, above n 25, 234.

⁶³ This article was written in September 2005. The sums available to the GEF will clearly change from time to time. For the most recent budget see UNFCCC Financial Mechanism online at <http://www.unfccc.int/cooperation_and_support/financial-mechanism/items/2807.php> (last accessed on 10 September 2006)

⁶⁴ By January 2005 (one year since it became operational), \$34.7 million (US) had been specifically pledged to the Special Climate Fund, the fund that is to be used to support priority activities in adaptation, technology transfer and associated capacity building: see Climate Change Secretariat, above n 8, 9.

⁶⁵ See The Associated Press, The Guardian Newspaper, ‘Breaking News Internationally: Major Developments in Hurricane Katrina’ (1 September 2005), (copy on file with author).

⁶⁶ The COP and the GEF Council jointly determine the amount of funds that the GEF requires during each funding cycle. States pledge a sum towards that funding cycle. The amount that a State pledges is within the sole remit of that State: Yamin and Depledge, above n 25, chapter 10.

⁶⁷ *Kyoto Protocol*, art 12.8 states that “[t]he Conference to the Parties serving as a meeting of the Parties to this Protocol shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the

However, even if adaptation funding is secured and engineering solutions adopted, it is clear that such measures do not guarantee protection against the worst natural disasters.⁶⁹ This may become a particularly relevant factor in negotiations as the UNFCCC incorporates cost-effectiveness considerations into climate change policy. Article 3.3, 'Principles', confirms one of the principles of the UNFCCC, that (my emphasis):

[t]he Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and to mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, *taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks, reservoirs of greenhouse gases and adaptation, and compromise by all economic sectors.* Efforts to address climate change may be carried out cooperatively by interested parties.

Further, decision 11/CP.1 establishes the initial guidance for the GEF and incorporates the requirement that adaptation strategies should be "cost-effective".⁷⁰

At what point in the UNFCCC negotiations will the economics of cost-benefit analysis intervene and subsume any progress towards adaptation for the Pacific Islands? Tuvalu has a population of approximately 11 000 people, a surface area of 24 square kilometres, a comparatively lengthy coastline of 590 kilometres and a Gross Domestic Product of 14 000 000

cost of adaptation". COP 6 agreed that the levy should equate to 2% of the Certified Emission Reduction units received in respect of Development Mechanism projects, as approved at COP 7, Decision 15/CP.7, para 15, online: <<http://www.unfccc.int>> (last accessed on 10 September 2006)

⁶⁸ This is a particularly apt question, given the restrictions that have been placed on the levy. For example, projects hosted by LDCs do not attract a levy: COP 7, Decision 15/CP.7, *ibid*.

⁶⁹ For an example, see the devastation caused to the US Gulf Coast and in particular, New Orleans by Hurricane Katrina and the subsequent failure of the storm surge levees, reported by Holbrook Mohn, 'Katrina Devastation Called Overwhelming' *The Guardian Newspaper*, 30 August 2005 (copy on file with the author).

⁷⁰ COP 1 (1995) Doc FCCC/CP/1995/7/Add.1, available online at <<http://unfccc.int/resources/docs/cop1/07a01.pdf#page=34>> (last accessed on 10 September 2006).

US dollars.⁷¹ Tuvalu is entirely dependent upon external funding for protection from climate change. Is it likely that Pacific Islands, such as Tuvalu, will attract the permanent, high level of funding required to build resilience to climate change, especially in light of the fact that protection will not be guaranteed by such expenditure?

It is clear that the cost of funding adaptation measures is a highly contentious and critical issue. This fact may militate against the development of an adaptation protocol and may also hinder the provision of effective adaptation via any mechanism. What then are the alternatives for the people of the Pacific Islands? Will they be forced to abandon their homelands in the face of an ensuing climatic onslaught?

IV. ABANDONMENT

A. Preliminary Note On Typology

Perruchoud⁷² describes persons fleeing their homeland because of natural disasters, as ‘uprooted persons’ or ‘de facto refugees’.⁷³ He acknowledges that such persons are frequently referred to as ‘environmental refugees’. ‘Environmental refugees’ have variously been described as persons “who no longer gain a secure livelihood in their traditional homelands because of what are primarily environmental factors of unusual scope”.⁷⁴

It is fair to say however that there are many critics of the term ‘environmental refugees’, including William Wood, the Official Geographer of the United States Government.⁷⁵ Critics have claimed that the term is “poorly defined, legally meaningless and confusing”.⁷⁶ In

⁷¹ Statistics available from the UN for 1998, UN Food and Agricultural Organisation, ‘Fishery Country Profile’, online: <<http://www.fao.org/fi/fcp/en/TUV/profile.htm>> (last accessed on 10 September 2006).

⁷² R Perruchoud, ‘Persons falling under the Mandate of the International Organization for Migration, to Whom the Organization might Provide Migration Services’ (1992) 4 *International Journal of Refugee Law* 205, 208.

⁷³ That is, persons who do not come within the strict definition of refugee as espoused by the 1951 *Convention Relating to the Status of Refugees*, opened for signature 28 July 1951 (entered into force 22 April 1954). For a detailed explanation see paras 4.4 hereinbelow.

⁷⁴ N Myers, J Kent, *Environmental Exodus: an Emergent Crisis in the Global Arena*, (The Climate Institute, 1995) 18 cited in Richard Black, above n 5.

⁷⁵ See William Wood ‘Eco-migration: Linkages Between Environmental Change and Migration’, chapter 2, Aristide R Zolberg and Peter M Benda (eds), *Global Migrants, Global Refugees* (Berghahn Books, 2001).

⁷⁶ Black, above n 5, 1

particular, it has been suggested that persons are rarely forced from their homes as a result of purely environmental factors; economic factors, poverty, unemployment and political and social factors usually play just as pivotal a role.⁷⁷ These factors are highly relevant within the context of this article. The point at which any of the Pacific Islands might become uninhabitable, does not necessarily equate simply with the point of submergence from sea-level rise. At the eleventh COP, the Hon. Isaac Figir, from the Federated States of Micronesia stated:⁷⁸

I have no doubt that at current levels of emissions of greenhouse gases (or even at a lower level where there is only a nominal decrease in the level of emissions of greenhouse gases) submergence is a possibility. The primary point is, however, that a long, long time before that point is reached, our reefs could be dead, our fishes fleeing, our groundwater completely salinated, our food crops depleted and our islands made uninhabitable.

Islands might become uninhabitable because they can no longer sustain the human population living on them. They may gradually submerge as a result of progressive sea level rise. A succession of abrupt climatic events may render the continuum of life on the islands unfeasible. At what point this might be reached and whether this is caused primarily by environmental factors and climate change or a multiplicity of economic, social and political causes is a matter for speculation. Suffice to say, the author acknowledges the complexities of the matter and avers that an exploration of such complexities are outside the remit of this article. For the purposes of this article, a wide typology has been adopted. The following discussion is premised on the assumption that the citizens of the Pacific SIDS have been forced from their homelands as a result of the adverse effects of climate change rendering life on the islands unsustainable. To facilitate the discussion, these people will be referred to as “climate change refugees”.

B. The Prospects of Abandonment

Today, there are approximately 8 000 000 people living in the South Pacific Islands and it is estimated that five percent of the world's

⁷⁷ See S Castles, ‘Environmental Change and Forced Migration: Making Sense of the Debate’ (October 2002) UNHCR, *New Issues in Refugee Research*, Working Paper No 70, 4-5.

⁷⁸ Hon Isaac V Figir (Federated States of Micronesia) (Berlin, 30 March), COP 11 reprinted in *Climate Change Secretariat*, above n 8, 24.

population live in SIDS.⁷⁹ The international community has been aware of the risk that, through climate change, the Pacific SIDS may become uninhabitable, since the late 1980s at least.⁸⁰ Failing mitigation of greenhouse gas emissions and in the absence of efficacious adaptation, the islands may eventually have to be abandoned.

C. Negotiations Concerning Abandonment

Of interest is the fact that the international community of sovereign States has not addressed the issue of abandonment, in any significant way. The focus within the climate change negotiations has been on mitigation and has turned to look in more detail at adaptation only recently. There is no plan of work, within the Meeting of the Parties, COPs or subsidiary bodies that focuses on the prospects of abandonment. There are no calls, at present, for a legal instrument dealing with this issue. To some extent, this is understandable.

Firstly, whilst the future prospect of mass refugee movements or abandonment has been raised within the climate change negotiations, States may not actually see this as an issue to be resolved within the UNFCCC. Rather, the pre-existing refugee mechanisms may be considered to be the appropriate fora or, in the alternative, bilateral negotiations may be deemed a more apt resolution. These prospects are considered below.

Secondly, even if States accepted that there is sufficient latitude within the UNFCCC to plan for and manage this future problem, it is not seen to be of sufficient priority at the moment. Thus far, the focus of global negotiations has, of necessity, been on mitigation. Obviously the source of the problem has to be tackled at the outset. To focus on the necessity of abandoning landmasses is defeatist and may well take the pressure off the imperative of mitigation. Invariably, the idea of losing their homeland is too abhorrent a concept for many to countenance. It is a solution of last resort. The loss of the national landmass is not simply a mere geographical or property loss, but may also equate to the loss of a way of life, culture, society and history of a people. This is particularly prescient in Pacific Island culture. Many Pacific nations hold the cultural belief that we are

⁷⁹ UN Secretariat, Department of Economic and Social Affairs, Statistics Division, 'World Statistics Pocketbook' (2003), online: <www.un.org> (last accessed on 10 September 2006). See Small Island Developing States Network, online: <www.sidsnet.org/aosis/index.html> (last accessed on 10 September 2006).

⁸⁰ See Pernetta, above n 14, and subsequent IPCC Reports and UNFCCC Secretariat publications culminating in *Climate Change: Small Island Developing States* (2005).

part of the land, our forefathers are within the land and we return to our land.

The “best guess” of the IPCC scientists is that sea level rise will become problematic for low-lying islands towards the end of this century⁸¹ and thus, a natural response is that there is plenty of time therefore to focus on mitigation and adaptation rather than abandonment. Abandonment would be an operation of such magnitude and fraught with such difficulty that it is only to be considered if all else fails and there is still great scepticism as to whether abandonment will ever come to pass.⁸² In addition, potential recipient countries may well have pressures of their own in the future that militate against a commitment to take large numbers of migrants. Australia, for example, is likely to suffer increasing desertification over the coming century.⁸³

Finally, there is the issue of ‘costs’. Multilateral agreements cost an enormous amount, not only in financial terms but also in the human resources and skills that are required to bring an agreement to fruition. Is mass migration still seen as too remote a possibility to waste time and resources preparing for? A slightly less tangible factor, but one of equal importance, is the fact that the political manoeuvring required to agree treaties has the potential to damage diplomatic relations and influence negotiations in other spheres. In addition, there may be the fear from developing States that developed States may reduce aid to account for additional formal legal commitments.

For all of these reasons and more, it is understandable why the prospect of mass migration, flowing from climate change, has not formed the basis for any negotiations thus far. There are however a number of factors that militate against this inertia.

The Fourth Assessment Report from the IPCC is due to be published in 2007. At the time of publication of the Third Assessment Report (TAR) in 2001, much of the information that premised the conclusions of that report was up to a decade old.⁸⁴ The TAR predicted that global temperatures could rise between 1.4 and 5.8 degrees Celsius over this coming century.⁸⁵

⁸¹ See Intergovernmental Panel on Climate Change, above n 15.

⁸² See Black, above n 5.

⁸³ See M Nippert, ‘Hitting Home’ (4 December 2004) *New Zealand Listener* 12, 16 citing a report from the Australian Government.

⁸⁴ B McGuire, *Climate Change 2004: Technical Paper* (Benfield Hazard Research Centre, UCL, 2004) 8.

⁸⁵ Intergovernmental Panel on Climate Change, above n 15.

It is becoming likely that the predictions of the TAR were underestimated. There is growing concern that the findings of the Fourth Assessment Report will forecast that global warming is likely to advance at a far more rapid rate than hitherto thought.⁸⁶

The Pacific Islands (and other SIDS) claim that the deleterious effects are being felt now and point to the increasing severity of extreme weather events in the Pacific.⁸⁷ Given the issues highlighted in part II of this article, what are the realistic prospects of adequate and timely funding and effective technological advances being in place to protect the islands? It may not be submergence by sea level rise (potentially a relatively distant, future prospect) that leads to the necessity to abandon islands. Mass migration may be prompted by a more abrupt turn of events. The increase in frequency and severity of cyclones and storm surges may make islands uninhabitable. The destruction caused, coupled with the inevitable repetition of such events, may make the prospect of Pacific Islanders returning to and rebuilding their homes unrealistic.

Resettlement of entire populations outside national boundaries has the potential to be extremely complicated and resource intensive. It is trite to say that, inevitably, this will prove culturally and socially disruptive. The difficulties of assimilation, present for all immigrants, will be hugely magnified if such mass migration is not managed in a planned, staged manner. Further, an emerging area of research posits that climate change, including the problems associated with mass migration, have the potential to create global security risks if pre-emptive action is not taken.⁸⁸

⁸⁶ See for example, McGuire, above n 84, 8 where he states, "recent findings suggest however that these figures [TAR] may represent a serious underestimate of the true level of global warming".

⁸⁷ See presentation by Tuvalu, above n 47. One particular example given by Tuvalu concerned the extraordinary rapid succession of cyclones that battered the Cook Islands over a 14-day period in 2005.

⁸⁸ See for example Peter Schwatz and Doug Randall, *An Abrupt Climate Change Scenario and its Implications for United States National Security* (2003), Report commissioned by the United States Defence Department, online: <http://www.environmentaldefense.org/documents/3566_AbruptClimateChange.pdf> (last accessed on 10 September 2006); Jon Barnett, 'Security and Climate Change' (2003) 13(1) *Global Environmental Change* 7; Robert McLeman and Barry Smit, *Climate Change, Migration and Security* (2004) CSIS Commentary Paper no 86, online: <<http://www.csis-scrs.gc.ca/en/publications/commentary/com86.asp>> (last accessed on 10 September 2006); S Oberthur et al, 'Climate Change and Conflict Prevention: The Relevance for the International Process on Climate Change' in *Climate Change and Conflict? An Emerging Issue* (2002) German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, 113, online:

The potential for large refugee flows needs to be managed and planned well in advance. This argument raises a number of issues but for our purposes the first question to ask is whether there is a pre-existing international legal framework or organisation that could encompass and manage this problem?

D. Existing Multilateral Mechanisms: The Statute of the United Nations High Commissioner for Refugees (UNHCR)

The Office of UNHCR was founded in 1950⁸⁹ to act on behalf of people forced from their homelands.⁹⁰ The Organisation seems the logical first choice, to deal with any potential climate change refugees. However, UNCHR exists to protect one particular group of uprooted people, ‘refugees’, and their ambit is constrained, to some extent, by the definition of the term ‘refugee’ in international law. Article 1 of the 1951 Convention Relating to the Status of Refugees, states as follows:⁹¹

1. Definition of the term “Refugee”

A. For the purposes of the present Convention, the term “refugee” shall apply to any person who:

....

(2) ... owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, unwilling to avail himself of the protection of that country: or who not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.

<<http://www.bmu.de/files/climges.pdf>> (last accessed on 10 September 2006); and F Sindico, ‘Ex-Post and Ex-Ante [Legal] Approaches to Climate Change Threats to the International Community’ (2005) 9 *New Zealand Journal of Environmental Law* 209.

⁸⁹ GA Res 429(V), *Draft Convention Relating to the Status of Refugees*, UN GAOR, 5th sess, 325th plen mtg, UN Doc A/Res/429V (1950).

⁹⁰ The Organisation promotes international refugee agreements, monitors governments’ compliance with international refugee law and provides practical assistance to refugees. UNHCR is not a supranational organisation; it is a non-political, humanitarian organisation. See UNHCR website for a comprehensive explanation, online: <<http://www.unhcr.ch>> (last accessed on 10 September 2006).

⁹¹ *Convention Relating to the Status of Refugees 1951*, opened for signature 28 July 1951 (entered into force 22 April 1954) (“the Refugee Convention”). See also *Protocol Relating to the Status of Refugees 1967*, opened for signature 31 January 1967 (entered into force 4 October 1967).

Might the victims of climate change induced disasters fall within the present Refugee Convention definition of a 'refugee'? Should they be eligible to attract the same degree of legal protection and material assistance from the international community?

There are arguments for and against such a proposition. The first difficulty relates to the fact that the Refugee Convention definition focuses on the *cause* of displacement rather than the *needs* of displaced persons. The Refugee Convention definition is wholly concerned with persons whose source of 'persecution' is human in origin and typically, although not always, as a result of "an act of government against an individuals".⁹² In addition, 'refugees' in the Refugee Convention sense, could not seek protection from their national government because the source of their persecution was invariably the State. Hence, they must turn to the international community for assistance. Academics have argued that 'refugees' fleeing for environmental reasons, still have the protection of their own national government regardless of the condition of their land.⁹³

Are victims of climate change suffering persecution that has a human origin? Would it be possible to argue that government action or inaction has knowingly contributed to the persecution of people by causing or significantly contributing to climate change?

It is the projected rapidity of 'climate change' that is the greatest concern to scientists (in the face of such rapid change, nature has insufficient time to adequately adjust to changed conditions) and it is widely considered that such rapidity has been induced or significantly contributed to by human actions.⁹⁴ Governments have been aware of the phenomenon of climate change for two decades or more. A plethora of scientists have highlighted the likely effects of climate change including the prospects of sea level rise and the aggravating effect of rising

⁹² See A Suhrke, 'Global Refugee Movements and Strategies of Response' in M Kritz (ed), *US Immigration and Refugee Policy: Global and Domestic Issues* (Lexington Books, 1983) 157, 159 and Guy Goodwin-Gill, *The Refugee in International Law*, (Clarendon Press, 2nd ed, 1996) 71-79, for the complexities of this issue and regional / State divergence of interpretation. Other UN Organisations are concerned with proffering humanitarian assistance in the face of natural disasters.

⁹³ For critiques of the concept of 'environmental refugees' see Black, above n 5, and Castles, above n 77.

⁹⁴ See IPCC Third Assessment Report, 'Climate Change 2001: Synthesis Report, Summary for Policymakers', 4-5, online: <<http://ipcc.ch/pub/reports.htm>> (last accessed on 10 September 2006).

temperatures on natural climatic events such as hurricanes and cyclones.⁹⁵ Thus far, governments, on a global scale, have failed to stem the increasing emission of greenhouse gases into the atmosphere.⁹⁶ However, the Pacific Islands' contributions to greenhouse gas emissions are de minimis.⁹⁷ Taken in isolation, emissions from the Pacific Islands would have little, if any, perceptible impact upon global climate. It would be disingenuous therefore to aver that the Pacific Island States' own governments are responsible for the climatic ravages likely to be visited upon the islands. Would this prevent an argument for refugee status from succeeding?

Those opposed to such an argument might also add that human acts, such as the burning of fossil fuels and land clearance, have not, or will not, *directly* lead to Pacific Islands becoming uninhabitable. It is the adverse, variable climatic conditions; sea level rise, destructive cyclones, storm surges, that cause the damage. This adds a layer of uncertainty in relation to causation issues. To date, there is still difficulty within scientific spheres, in linking specific natural events directly to greenhouse gas emissions, as so many factors come into play. The IPCC Reports acknowledge these uncertainties.⁹⁸ In the face of a traditional 'causation' approach, it may be difficult to 'prove' that the source of the Islanders' need for refuge was of human origin.⁹⁹

What about an alternative perspective that governments have failed to protect or are incapable of protecting citizens? It is possible to argue that, regardless of the precise causes of the persecution, national governments have failed or are likely to fail to protect the populace from the persecution of climate change. Further, international assistance will be required precisely because national governments have proved incapable of protecting their citizens from climate change.¹⁰⁰

⁹⁵ N Myers, *Environmental Refugees* (Climate Institute of Washington, 1995) 150 and IPCC, First Assessment Report, Second Assessment Report, Third Assessment Report, online: <<http://ipcc.ch/pub/reports.htm>> (last accessed on 10 September 2006)

⁹⁶ See Ailsa Warnock, 'The Climate Change Regime: Efficacy, Compliance and Enforcement' (2004) 8 *New Zealand Journal of Environmental Law* 99, 101.

⁹⁷ See Climate Change Secretariat, above n 8, 10-12.

⁹⁸ See IPCC, above n 94.

⁹⁹ As climate change science progresses this difficulty may dissipate.

¹⁰⁰ For a discussion as to whether citizens would become 'stateless' persons if their national landmasses were to disappear, see Vivian Markovich and David Annandale, 'Sinking without a Life Jacket? Sea Level Rise and the Position of Small Island States in International Law' (2000) 5(2) *Asia Pacific Journal of Environmental Law* 135, 147. The article argues to the contrary. Further, see the discussion in David Freestone, 'International Law and Sea Level Rise' in Robin Churchill and David Freestone, *International Law and*

This is the basis for Cooper's proposition that 'environmental refugees' and specifically 'climate change refugees', already come within the Refugee Convention definition of refugee.¹⁰¹ The logic of the argument is thus: within the international sphere, the Pacific Island governments have been unable to exert sufficient influence to halt increasing emissions of greenhouse gases. On a national level, those governments have, to date, achieved little in the way of adaptation measures and may experience difficulties in providing efficacious protection in the future.¹⁰² Would this perspective enable victims of climate change to come within the definition of refugee as espoused by the Refugee Convention? Goodwin-Gill notes that neither the Refugee "Convention nor the *travaux préparatoires* say much about the source of the persecution feared by the refugee and no necessary linkage between persecution and government authority is formally required" but that "the Convention does recognize the relation between protection and fear of prosecution. A Convention refugee, by definition, must be unwilling or unable to avail himself of the protection of the State or government."¹⁰³

The concept of a government failing to protect its citizens, thereby triggering refugee status for its citizens, is not as straight-forward as Cooper's analysis would suggest. As there is no clear guidance from the Refugee Convention itself, States have interpreted 'persecution' and the 'source of persecution' in various ways.¹⁰⁴ The issue is highly complex and such complexities are exacerbated by a divergence in State practice and the views of academic commentators.¹⁰⁵ For example, the 'intent' to persecute may be a relevant factor. In German jurisprudence, for example, if the State is unwilling to provide protection, that unwillingness must be shown

Global Climate Change (Graham & Trotman, 1991) 116, which also discounts this possibility.

¹⁰¹ See Jessica Cooper, 'Environmental Refugees: Meeting the Requirements of the Refugee Definition' (1998) 6 *New York University Environmental Law Journal* 480, 522.

¹⁰² See presentation by Tuvalu, above n 47. This is to some extent understandable given the relative poverty of the islands, the difficulty in accessing GEF funding, the lack of skills and infrastructure on the islands and limited access to technology.

¹⁰³ Goodwin-Gill, above n 92, 71-71.

¹⁰⁴ UNHCR has a mandate to promote refugee law, protect refugees and monitor the implementation of the Refugee Convention but national governments decide whether an applicant is a refugee in accordance with State determination procedures and national laws. See UNHCR website online: <<http://unhcr.ch>> (last accessed on 10 September 2006).

¹⁰⁵ Goodwin-Gill, above n 92, 69-79. Further, see Niraj Nathwani, *Rethinking Refugee Law* (Martinus Nijhoff Publishers 2003) chp 2 "Current strategies to restrict the scope of the refugee concept" wherein he discusses the necessity of State responsibility in persecution.

to be politically motivated. Arguably, in the context of climate change, Pacific Island governments would wish to protect their citizens but may be incapable of doing so. In the face of incapacity, German jurisprudence requires that the political motivation of the actual persecutor be taken into account. French practice is similarly intricate.¹⁰⁶ When such intricacies are interposed into Cooper's proposition, the difficulties become apparent. In relation to climate change induced 'refugees', how could you ever satisfy a test that the intentions of the greenhouse gas emitting States were persecutory?

Even if such an argument succeeded, a more discreet causal element is required to bring a victim of climate change within the Refugee Convention definition. An applicant must establish a 'well-founded fear of persecution' on one of the grounds stated. Could a person forced from their homeland due to the ravages of climate change claim persecution on the grounds of race, nationality or membership of a particular social group? One argument might be that Pacific Islanders are "members of a social group that lack the political power to protect their environment".¹⁰⁷ In addition, by virtue of their nationality, the specific geological and geographical characteristics of their homelands make them particularly susceptible to the effects of climate change.

However, whilst seemingly attractive, these arguments have attracted few academic or other supporters.¹⁰⁸ Castles specifically rejects the idea that 'environmental refugees' fall within the present Refugee Convention definition.¹⁰⁹ He opines that the term 'environmental refugee' could "only have a legal meaning in the narrow sense of people forced to flee when repressive forces use environmental destruction such as defoliation or polluting of water, as an instrument of war against a specific group".¹¹⁰ This conclusion appears to re-assert the necessity for a direct, purposeful link between the persecuted and the reasons for their persecution and the intent of the persecutor.

¹⁰⁶ Gottfried Kofner and Peter Nicolaus von M Grünwald, *Grundlagen des Asylrechts in der Bundesrepublik Deutschland* (Unbekannter Einband, 1986) 436-40 cited in Goodman-Gill, above n 92, 73.

¹⁰⁷ See Cooper, above n 101.

¹⁰⁸ See Markovich and Annandale, above n 100, 151.

¹⁰⁹ Although his paper did not specifically concern people fleeing from climate change induced disasters.

¹¹⁰ Castles, above n 77, 8.

1. *Is There any Prospect that the Text of the Refugee Convention Might be Expanded to Encompass a Broader Definition of 'Refugee'?*

Commentators have considered whether the definition of 'refugee' in the Refugee Convention should be expanded and in particular, expanded along human rights lines. The Refugee Convention has its foundations in concepts of human rights and human rights law and indeed the preamble cites the 1948 Universal Declaration of Human Rights¹¹¹ and the principle that "human beings shall enjoy fundamental rights and freedoms". In addition, the Refugee Convention reinforces the concept of freedom from persecution on the grounds of race, religion, nationality, membership of a particular social group and political opinion. Such rights are mirrored in the Universal Declaration of Human Rights.¹¹² Accordingly, commentators have argued that the Refugee Convention is imbued with notions of human rights. Cooper notes however that the Refugee Convention omitted to include the broader economic and social rights contained within the Universal Declaration¹¹³ and further, that, the Refugee Convention has failed to keep pace with the rapid development in human rights law over the last half century. This, she argues, is incongruous and suggests that a broader definition would allow 'environmental refugees' to come within the protection of the Refugee Convention. Cooper suggests a textual formula that would read:¹¹⁴

any person who (1) owing to a well founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, or (2) degraded environmental conditions threatening his life, health, means of subsistence, or use of natural resources, is outside his country... etc.

Although it appears that she is arguing that the "reasons for" part of the definition should be emasculated, the necessity of the 'causal' element be

¹¹¹ GA Res 217 (III)A, *International Bill of Human Rights: "Universal Declaration of Human Rights"*, UN GAOR, 3rd sess, 183rd plen mtg, UN Doc A/810 (1948). Though note Nathwani, above n 105, 18-19, where he comments that the preamble only asserts that refugees should be afforded human rights protection in the recipient country and "the Convention does not state that a human rights violation is a condition for refugee status".

¹¹² See *ibid*, arts 2 and 18-20.

¹¹³ See Cooper, above n 101, 492, specifically rights contained within articles 3, 22 and 25. For the reasons for this limitation (which is founded on States' desires to limit the numbers of potential refugees), see Goodwin-Gill, above n 92, chp 1 "Definition and Description" and in particular pages 4-20.

¹¹⁴ Cooper, above n 101, 494.

removed, this is incorrect. Following her argument, the concept of “degraded environmental conditions” is a discriminatory factor based on the specific identity or characteristics of the persecuted and thus this reinforces the causal (as opposed to needs) focus of the Refugee Convention. Cooper does however acknowledge that such a proposal is unlikely to meet with political acceptance and this is inevitably correct.¹¹⁵

There may be valid arguments against an expansion of the refugee definition. Nathwani fears that refugee law will lose its theoretical neutrality if the concept of human rights violations is explicitly imported into the Convention.¹¹⁶ Human rights violations, by definition, create opprobrium. For a State to acknowledge the human rights violations of another State will incur particular diplomatic difficulties. This may lead to unwillingness on the part of the recipient State to accept applicants as refugees in this context.¹¹⁷ In addition, a wider definition will create greater numbers of refugees. This directly contradicts the desire of developed States to limit the numbers of eligible refugees seeking asylum. Nathwani posits that this will create the need for developed States to determine a “hierarchy of human rights” which is ultimately contentious and undesirable in the context of refugee law.¹¹⁸

In summary, for the reasons stated above amongst others, it is highly unlikely that a textual expansion of the Refugee Convention definition of ‘a refugee’ will come into existence in the near future.

*2. Might the Victims of Climate Change Induced Disasters Fall Within a Broader Definition of Refugees that is Emerging in Customary International Law?*¹¹⁹

Treaty law is not of course the only source of international law. Custom can crystallise into international law.¹²⁰ Is a broader definition of ‘a refugee’ emerging in international law? Goodwin-Gill avers that although

¹¹⁵ Cooper, *ibid* 495 and see Castles, above n 77, 10, outlining the present political opposition to expanding the numbers of persons falling within the definition of a refugee.

¹¹⁶ Nathwani, above n 105, 17-26.

¹¹⁷ *Ibid* 21.

¹¹⁸ *Ibid* 22-23.

¹¹⁹ The concept of an emerging customary law is posited by James C Hathaway, *The Law of Refugee Status* (Butterworths, 1991) 16-21.

¹²⁰ See article 38(1)(b) of the *Statute of the Permanent Court of International Justice*, opened for signature 26 June 1945, 39 AJIL (entered into force 24 October 1945) for the application of customary law: “The Court... shall apply (b) international custom, as evidence of a general practice accepted as law”.

States are not willing to counter any expansion of the Refugee Convention definition of refugees, State practice “commonly reflects recognition of the protection needs and entitlements of a broader class”.¹²¹ This assertion is supported by Hathaway’s view that “there is a virtual unanimity of State practice in affording some type of protection to refugees outside the formal scope of the Convention”.¹²² In addition, two regional agreements have explicitly expanded the definition of a ‘refugee’ from the constrained version encapsulated in the Refugee Convention. The 1974 Organisation of African Unity Convention¹²³ states at article 1(2) that:

[t]he term refugee shall apply to every person who owing to external aggression, occupation, foreign domination or *events seriously disturbing the public order* in either part or the whole of his country of origin, or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality.

It is arguable that the phrase *events seriously disturbing the public order* is particularly apposite and referable to climate change induced environmental disasters.

In 1984, ten Central American States adopted the Cartagena Declaration on Refugees.¹²⁴ Conclusion III.3 declared that:

[t]he definition or concept of a refugee to be recommended for use in the region, is one which, in addition to containing the elements of the 1951 Convention and the 1967 Protocol, includes among refugees persons who have fled their country because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, *massive violations of human rights or other circumstances which have seriously disturbed public order.*

There is an emerging interrelationship between human rights law and environmental advocacy. A growing jurisprudence recognises and enforces substantive human rights linked to environmental protection, principally the right to life, health, culture, peaceful enjoyment of one’s possessions

¹²¹ Goodwin-Gill, above n 92, 79. For an apposite example, see the policy adopted by Australia described herein below.

¹²² Hathaway, above n 119, 22.

¹²³ Organisation of African Unity, *Convention Governing the Specific Aspects of Refugee Problems in Africa*, opened for signature 10 September 1969, 1001 UNTS 45 (entered into force 20 June 1974).

¹²⁴ *Cartagena Declaration on Refugees*, opened for signature 22 November 1984, OAS/Ser.L./V/II.66.doc.10, rev 1.

and the right to respect for one's private life and home.¹²⁵ The Cartagena definition of a refugee, that includes freedom from persecution of *massive human rights violations*, would arguably cover persons that had to abandon their homes due to the most severe, adverse effects of climate change. Victims of climate change may have lost their homes, property and means of subsistence. Their health and lives may be threatened by the environmental devastation.

Despite the foregoing, it is unlikely that an expanded definition of 'refugee' has emerged, fully formed as international customary law. What would that definition be? It is incredibly difficult to determine when custom becomes law but arguably both evidence of State practice and *opinio iuris* are required.¹²⁶ As Birnie and Boyle note:¹²⁷

both conduct and conviction on the part of the state are required before it can be said that a custom has become law... it is increasingly difficult, in a world of over 190 states of diverse cultures, policies, interests and legal systems to identify universal practice... deciding what has become customary law involves examination not only of states' authoritative statements, unilateral and multilateral declarations, legislation and other acts, court decisions and actions in international organizations relevant to particular issues, but also their policies and conduct in the numerous other international bodies.

Ultimately, a State must consent either explicitly or by implication, to the creation of new customary law.¹²⁸ Even the enactment of legislation is not conclusive proof that a State so consents; any such expanded definition must be applied and enforced by the State. In addition, a State may have

¹²⁵ D Shelton, "Environmental Jurisprudence of International Human Rights Tribunals" in Romina Picolotti and Jorge Taillant (eds), *Linking Human Rights and Environment* (University of Arizona Press, 2003). The United Nations Human Rights Committee, the Inter-American Commission on Human Rights, the European Commission and the Court of Human Rights, the European Court of Justice and the African Commission on Human Rights have all enforced human rights linked with environmental protection.

¹²⁶ See Ian Brownlie, *Principles of Public International Law* (Oxford University Press, 5th ed, 1998) 7. Further, the ICJ has, in a number of decisions, stated that *opinio iuris* should be seen as having equal importance with State practice. For examples, see *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya v Malta)* (Judgment) [1985] ICJ Rep, 13 and *Advisory Opinion on the Legality of the Threat or Use by a State of Nuclear Weapons in Armed Conflict* [1996] ICJ Rep, 226.

¹²⁷ Patricia Birnie and Alan Boyle, *International Law and the Environment* (Oxford University Press, 2nd ed, 2002) 16.

¹²⁸ *Ibid.*

persistently objected to the norm creation.¹²⁹ It is unlikely that consensus would be reached that a new norm of customary international refugee law has been established, in the present political climate.

C. Summary

Individual States, or specific regions in the case of Central America and Africa, may well be prepared to accommodate climate change refugees but there is no global homogeneity in relation to the approach to be adopted. In order to deal effectively, efficiently and fairly with climate change refugees, a global agreement is to be preferred. In addition, such an agreement should provide pre-planning for the staged removal of refugees so as to facilitate the integration of potentially large numbers of persons into a new society with the least amount of disruption. By definition, a Refugee Convention refugee must already be outside his or her country of origin¹³⁰ and this threshold requirement means that existing refugee law may not be the best vehicle for managing peoples displaced by climate change.

To summarise, it is highly unlikely that the Refugee Convention could be used as a vehicle to globally plan and manage a migration from the Pacific Islands as a result of climate change. There has not been any significant re-negotiation of the Refugee Convention for the last half-century. It is, as far as many States are concerned, a fully formed treaty that is not open for re-negotiation. In the present political climate, it is unlikely that any consensus would be reached, that the Refugee Convention could or should be used to encompass plans for a mass migration premised on climate change.

The UNHCR acknowledges that there are similarities between 'traditional refugees' and 'environmental refugees' including the forced nature of their flight and their need for material assistance and permission to live in foreign States. In addition, UNHCR accepts that 'environmental refugees' need assistance but questions what organisation and / or legal

¹²⁹ In order to avoid being bound by an emerging rule of customary international law, a State must clearly and consistently indicate that it does not wish to be bound. For a discussion of the 'persistent objector' concept see Donald Anton, Penelope Mathew and Wayne Morgan, *International Law: Cases and Materials* (Oxford University Press, 2005) 228; Brownlie, above n 126, 10. Further, see *Asylum Case (Columbia v Peru)* [1950] ICJ Rep, 277 and *Fisheries Case (United Kingdom v Norway)* [1951] ICJ Rep, 131.

¹³⁰ Goodwin-Gill, above n 92, 40.

mechanism would be the most appropriate conduit for help.¹³¹ In all the circumstances, it appears that a new treaty, potentially encompassing displaced person in general, would be required to manage the problem of climate change refugees.

E. Existing Bilateral Agreements

As stated above, a global agreement on managing climate change refugees is to be preferred. However, as a precursor to a global agreement, it may be of value to consider whether there are any existing bilateral agreements that recognise the potential for flows of climate change refugees.

In 2000, Ionata Ionata, the Prime Minister of Tuvalu called upon States to consider offering permanent residency status to Tuvaluan citizens forced to leave their homelands as a result of climate change and sea level rise.¹³² One academic, writing in 2003, posited that it is “incumbent on Australia, New Zealand and the United States to prepare for greater numbers of Pacific Island immigrants as these countries are capable of accommodating larger numbers of people, they already have substantial populations of Pacific Islanders, and they are in no small way responsible for climate change”.¹³³ Whilst a comprehensive analysis of the immigration policies in respect to the Pacific Islands of all States is beyond the scope of this paper, an analysis of the approach taken by those three specified States is achievable. Accordingly, have New Zealand, Australia and /or the United States of America made any special provision to date, for immigrants from the Pacific Islands? If so, is such preferential treatment founded in the Pacific Islanders’ claims that they are already suffering the adverse effects of climate change?¹³⁴

*1. New Zealand*¹³⁵

Following Tuvalu’s plea, the Minister for Foreign Affairs in New Zealand, Phil Goff, asserted in a media interview that whilst sea-level rise, thus far, did not endanger the Islands “if the Islands were to become uninhabitable,

¹³¹ UNHCR , ‘The Environment: A Critical Time’ (2002) 2(127) *Refugees* 12 – 13.

¹³² J Barnett, ‘Security and Climate Change’ (2003) 1 *Global Environmental Change* 7, 12.

¹³³ *Ibid.*

¹³⁴ See submissions made by Tuvalu on behalf of the Small Island States to the Seminar of Government Experts, above n 47.

¹³⁵ The Legislation governing immigration and refugee status in New Zealand is the *Immigration Act 1987* (NZ).

then of course New Zealand, Australia, the Pacific and other countries would come to their assistance".¹³⁶ Goff suggested that New Zealand "may look at a [permanent residency] scheme for Tuvaluans but on a [sic] fairly restricted figures. You're talking about double figures, not four figures, on an annual basis". On 1 July 2001, the New Zealand Immigration Department introduced the Pacific Island Access Category. Pursuant to this scheme, a preferential quota was established for immigrants from Tonga, Tuvalu and Kiribati seeking to reside in New Zealand. On the proviso that they met basic character requirements, each year 250 immigrants from Tonga, 75 from Tuvalu and 50 from Kiribati were to be afforded permanent residency status in New Zealand. The quota was to be conducted by ballot. In a statement tabled to announce the scheme, Goff succinctly stated that, "the scheme will assist these small nations".¹³⁷ At a later date, the scheme was extended to encompass Fijian nationals.

There is no suggestion in the government statements that accompanied the introduction of the Pacific Island Access Category, that the scheme flowed from a necessity to heed any environmental pressures the islanders were exposed to, nor any suggestion that this was part of a progressive assimilation of the islanders into New Zealand society to 'ease the passing of the states'. The notes, accompanying the explanation of the scheme, state that Pacific Islanders wish to move to New Zealand for "work opportunities, education and family reasons" and the specified islands were former protectorates.¹³⁸ Accordingly, it is difficult to ascertain the primary reasons for the scheme. Whilst the practical effects of this scheme could be considered to be a gradual migration of the islands' populations to New Zealand, in the absence of a clear policy statement, it would be inappropriate to assert that New Zealand has accepted the concept of Pacific Island environmental migrants or refugees. There is no suggestion that New Zealand (in isolation) has accepted the eventual demise of these Pacific Island States and wishes to manage this catastrophe and politically, how could there be? Such a scheme is, of course, in any event, susceptible to the policy objectives accompanying a change of government. The

¹³⁶ Phil Goff, Minister for Foreign Affairs, New Zealand (21 June 2000) Reuters News Service, online: <www.heatisonline.org> (last accessed on 10 September 2006).

¹³⁷ See the statement by the Hon Lianne Dalziel, Minister for Immigration and the Hon Phil Goff, Minister for Foreign Affairs, 'Government Announces Pacific Island Access Scheme' (20 December 2001) online: <www.beehive.govt.nz> (last accessed on 10 September 2006).

¹³⁸ See New Zealand Department of Immigration, Homepage, online: <<http://immigration.govt.nz/migrant/stream/live/pacificaccess>> (last accessed on 10 September 2006).

scheme may be abandoned before significant numbers of islanders have migrated.

2. *Australia*¹³⁹

Australia does not have a separate migrant quota allocation for Pacific Islanders. However, there is an annual allocated quota of 13 000 places for those seeking 'humanitarian assistance' or refugees channelled through the UNHCR.¹⁴⁰ To qualify for 'humanitarian assistance', any applicant must show that they have been subject to "substantial discrimination amounting to a gross violation of human rights within their own country".¹⁴¹ In addition, such an applicant must be "proposed" or sponsored by an Australian citizen or qualifying organisation. Although the use of a human rights based approach is interesting,¹⁴² the definition of those seeking 'humanitarian assistance' is narrowly drafted. Would Pacific Islanders suffering the deleterious effects of climate change come within it? Potentially, the necessity for an applicant to have suffered 'substantial discrimination' militates against that. Climate change, in the form of sea level rise or cyclones, will not discriminate between individual islanders.

An interesting development is taking place, however. Media reports assert that the Government of Nauru is "presently in negotiations with the Australian Government to relocate it's entire population".¹⁴³ Nauru is suffering from a combination of severe economic and environmental problems and these difficulties have proven to be a catalyst for negotiations.¹⁴⁴ The State has exhausted the phosphate reserves that provided the main source of income for the population. As a result of decades of intensive mining, Nauru is suffering from chronic

¹³⁹ The legislation governing immigration and refugee status in Australia is the *Migration Act 1958* (AU).

¹⁴⁰ See the website for The Australian Government Department of Immigration and Multicultural and Indigenous Affairs, online <<http://www.immi.gov.au>> (last accessed on 10 September 2006).

¹⁴¹ See the website for The Australian Government Department of Immigration and Multicultural and Indigenous Affairs, online <http://www.immi.gov.au/refugee/migrating_refugee.htm> (last accessed on 10 September 2006).

¹⁴² See discussion above.

¹⁴³ See M Nippert, 'Hitting Home' (4 December 2004) *New Zealand Listener* 12, 17.

¹⁴⁴ See K Seneviratne, 'Nauru Turns to Dust' (26 May 1999) *The Asia Times*, (copy on file with the author) and for a wider exploration of the problem see Christopher G Weeramantry, *Nauru: Environmental Damage under International Trusteeship*, (Oxford University Press, 1992).

environmental degradation. Eighty percent of the landmass is unusable and the State is wholly dependent on imports for survival. Having squandered, through inefficiency and corruption, a financial settlement worth in the region of 90 million dollars,¹⁴⁵ Nauru does not have the financial resources necessary to restore ecological balance.¹⁴⁶ In the event that an agreement is reached to transpose the entire Nauru population, an interesting precedent may be set for the purposes of climate change refugees.

3. *The United States of America*¹⁴⁷

The United States of America has a number of programmes designed to help those who have been forcibly removed from their homeland.¹⁴⁸ Each year a quota is set, specifying the number of places available to 'refugees'. For 2005, 70 000 places were allocated for refugees. The US Government applies the definition provided in the 1951 Convention to the term 'refugee'.¹⁴⁹

The Attorney General of the US also has the power to allocate 'humanitarian parole', on a case-by-case basis, to deserving applicants. This is a temporary scheme that enables those in urgent humanitarian need to remain in the US for up to one year. This provision is only to be used in the most "exceptional" cases.¹⁵⁰

¹⁴⁵ In 1989, Nauru lodged a claim with the International Court of Justice in The Hague against Australia, New Zealand and the United Kingdom to seek compensation for the phosphate extracted by those countries. The matter was settled out of Court in 1993. See BBC News, 'Timeline: Nauru', online: <<http://news.bbc.co.uk/1/hi/world/asia-pacific/1134774.stm>> (last accessed on 10 September 2006).

¹⁴⁶ It is anticipated that US\$210 million is required and the work would take 20 years to complete: see Seneviratne, above n 144.

¹⁴⁷ The legislation governing the US national regulation of refugees is the *Immigration and Nationality Act* (US), 8 USC 1101 et seq (2003) and the *Refugee Act 1980* (US).

¹⁴⁸ See The United States of America Department of Homeland Security, Citizenship and Immigration Service, Homepage, online: <<http://uscis.gov/portal/site/uscis>> (last accessed on 10 September 2006).

¹⁴⁹ See The United States of America Department of Homeland Security, Citizenship and Immigration Service online at <<http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=c9b4ef4c766fd010VgnVCM1000000ecd190aRCRD&vgnnextchannel=c9b4ef4c766fd010VgnVCM1000000ecd190aRCRD>> (last accessed 10 September 2006).

¹⁵⁰ See The United States of America Department of Homeland Security, Citizenship and Immigration Service online at <<http://www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e66f614176543f6d1a/?vgnextoid=b04596981298d010VgnVCM10000048f3d6a1RCRD&vgnnextchannel=828807b03d92b010VgnVCM10000045f3d6a1RCRD>> (last accessed 10 September 2006).

The 'Temporary Protected Status Programme' grants temporary immigration status to eligible nationals of designated countries. Countries that are in the grip of armed conflict, are suffering the temporary effects of an environmental disaster or other extraordinary conditions are specified and listed on the Programme. Nationals of those States that meet basic character requirements, will be entitled to remain in the US for a period that correlates to the length of time that their country of origin is so designated.¹⁵¹

There is no specific immigration quota for Pacific Islanders. It is clear that the US immigration framework has, in theory, the necessary flexibility to take account of an abrupt environmental catastrophe but there are no programmes that provide for a planned, staged migration from the Pacific Islands (nor indeed from any other SIDS that are at specific risk from climate change).

4. Summary

New Zealand, Australia and the US are amongst the developed nation States most readily affiliated with the Pacific Islands. There is little, if any evidence that these nations have accepted the need to make special provision for accommodating a gradual flow of refugees from the Pacific SIDS on the basis of climate change grounds.

V. DEALING WITH CLIMATE CHANGE REFUGEES WITHIN THE CLIMATE CHANGE REGIME

Would it be appropriate to commence negotiations for an agreement relating to climate change refugees within the auspices of the climate change regime and specifically within negotiations focussing upon 'adaptation'? Is the concept of 'adaptation' wide enough to encompass such discussions?

The definition of 'adaptation' is not included in the article 1 list of 'Definitions' of the UNFCCC.¹⁵² Article 31(1) of the Vienna Convention

¹⁵¹ See The United States of America Department of Homeland Security, Citizenship and Immigration Service online at <<http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=609d3591ec04d010VgnVCM10000048f3d6a1RCRD&vgnnextchannel=609d3591ec04d010VgnVCM10000048f3d6a1RCRD>> (last accessed 10 September 2006).

¹⁵² The IPCC defines adaptation as adjustments in practices, processes, or structure which can moderate or offset the potential for damage or take advantage of opportunities created by a given change in climate, see IPCC, Third Assessment Report, 'Climate Change 2001:

on the Law of Treaties states that a treaty shall “be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in the context and in light of its object and purpose”.¹⁵³ The ordinary use and meaning of ‘adapt’ or ‘adaptation to’ includes to “become adjusted to new conditions”.¹⁵⁴ Looked at within the context of the treaty text alone, it is arguable that a broad meaning has been given to the concept of ‘adaptation’.¹⁵⁵ By way of example, article 4.8 suggests that States take a ‘broad-brush’ approach in their methods to assist developing countries in responding to the effects of climate change. Specifically the article states that Parties shall give “full consideration to what actions are necessary... to meet the specific needs and concerns of developing country Parties”. The Article continues with a non-exhaustive list of potential assistance “including actions related to funding, insurance and the transfer of technology”. The Conference of the Parties is given a mandate to take such action as “appropriate with respect to this paragraph”. This article is widely drafted (as is appropriate in a Framework Treaty); there is clearly scope for negotiations of an ‘Adaptation Protocol’. Given the leeway afforded in the text of the UNFCCC, negotiations could, in theory, consider the necessity of eventual abandonment and planned migration policies. The text would not prevent this, only the political will of the Parties.

States opposed to incorporating negotiations on climate change refugees within the climate change regime may assert that, in principle, the UNFCCC is not the appropriate forum and that the existing refugee law mechanisms should wrestle with the issue. As discussed above however, the existing international agreement relating to refugees would not provide for climate change refugees and there is no active, ongoing process of re-negotiation that exists in relation to the Refugee Convention. It would be most unlikely that climate change refugees would provide the impetus to re-open the definition of a refugee and the concepts contained within the Refugee Convention. Why should the tragedy of people forced from their

Impacts, Adaptation and Vulnerability’, online at <<http://www.ipcc.ch/pub/reports.htm>> (last accessed 10 September 2006).

¹⁵³ *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 3311, 8 ILM 689 (entered into force 27 January 1980).

¹⁵⁴ See D Thompson (ed), *The Concise Oxford Dictionary of Modern English* (Clarendon Press, 1995).

¹⁵⁵ Yamin and Depledge suggest that it is the very breadth of the term ‘adaptation’ that has hindered agreement by “presenting problems as far as the prioritisation of resources is concerned”: Yamin and Depledge, above n 25, 215.

home by climate change (a discreet causal element) force a reconsideration of refugee law when the need to assist internally displaced persons, the stateless, economic migrants and other environmental refugees, has not provided sufficient impetus? To 'open the door' of refugee law to the victims of climate change will invariably lead to 'floodgates' arguments. Opponents may claim that the refugee system will become swamped and unmanageable and that the rights and needs of 'traditional' refugees will be lost in the melee.

There will invariably be opposition to the very concept of a 'climate change refugee'. It may be extremely difficult to provide a precise definition for this term. The case of submerged Pacific Islanders fits easily into the concept but what of other persons who, as Isaac V Figir suggests, have been deprived of their means of subsistence by climate change?¹⁵⁶ At what point does a person become a refugee to climate change? How do you draw the line between economic migrants and so-called climate change refugees? The concept of a climate change refugee is premised upon a mono-causality that in reality seldom exists. The effects of climate change will be magnified for developing nations because of over population, unsustainable development practices, inefficient politicians, poverty, lack of infrastructure, technology and so on. Will climate change need to be the pre-eminent or a significant factor in the flight of persons from their homelands? How will this be assessed and measured? Should an agreement be premised on a 'needs' or 'causal' basis? Would an agreement based on the needs of the refugees, be too wide and unmanageable? Will scientific developments reach such an advanced level that causation for climate change and the precise effects of greenhouse gas emissions into the atmosphere cease to be contentious issues?

Delineating definitions proves a difficulty whenever legal instruments are drafted but such difficulties are generally surmountable. Assuming that this will be the case in the context of 'climate change refugees', there are clear arguments in favour of incorporating plans for abandonment within the negotiations on adaptation. Firstly, abandonment is the obvious fall back position in the event of mitigation and adaptation ultimately failing. Accordingly, on that basis, the climate change regime is an appropriate forum. A cynical view may be that, sadly, abandonment is ultimately the most realistic prospect for many Pacific Islands. Protecting the islands

¹⁵⁶ Hon Isaac V Figir (Federated States of Micronesia) 30 March, Berlin, Germany, COP 11 reprinted in UNFCCC, *Climate Change: Small Island Developing States*, above n 1, 24.

from climate change may prove impossible and / or prohibitively expensive and as a result 'politically unjustifiable' for foreign States funding the adaptation. How is a price to be put on the value of the islanders preserving their homelands, way of life, culture and society? Will these factors be taken into account in calculations assessing whether adaptation of the islands meets the 'cost-effective' criteria of the UNFCCC? Of course, one hopes that these arguments, unpalatable as they are, will not dictate the fate of the Pacific Islanders. Unfortunately, the reluctance to 'sacrifice' economic development in order to mitigate greenhouse gas emissions that colours the climate change debate in many States does not bode well for such hopes.

Secondly, the climate change regime could, in theory, prove efficient in determining an efficacious protocol concerning abandonment. The ongoing UNFCCC negotiations concern practically all States and have recently turned to focus on adaptation in all its guises. A massive international effort exists to formulate, inter alia, legal responses to climate change so the resources, skills and potentially, the willingness to address this issue,¹⁵⁷ are all present within the climate change regime.

Thirdly, if abandonment is to become a realistic prospect, the international community needs to start to grapple with the issue now. The machinery needs to be in place before any crisis occurs, as any migration would need to be carefully staged and planned to avoid the difficulties identified in paragraph 5.3.8 above. Multilateral negotiations take years if not decades. The requisite UN bureaucracy builds delay into the system and agreements are slow in the making as nation States are reluctant to commit resources to a problem or to make commitments that might sacrifice a degree of national sovereignty. Many issues come to the fore that inevitably will lead to heated negotiation and potentially, highly detailed provisions. For example, there will be a need for the burden of mass migration to be shared equitably between potential recipient States. How will this be achieved? Will it be based upon the needs of the climate change refugees; on geographical closeness; on social similarities between donor and host; on the resource abilities of the host; on a 'compensatory', 'polluter pays' basis? Will monetary compensation accompany the refugees who have lost their homeland and if so who will pay? Such

¹⁵⁷ Again, a highly cynical view may be that compared to the costs of adaptation, abandonment may be the lesser of the financial evils and therefore a slightly more attractive option for developed States. However, given the anti-immigrant rhetoric conveyed by parts of society in economically developed nations, neither prospect may be politically attractive.

potentially complex 'formulae' or criteria need to be worked out in advance. In addition, the potential loss of an entire nation raises particular issues within the context of international law. Will the nation State still exist in the absence of its land-based territory? Could a State exist as a separate entity within the land borders of another State? What would become of the submerged States' territorial waters and exclusive economic zone?¹⁵⁸ Rather than establishing a completely separate set of negotiations under, for example, the auspices of the UNHCR, which will increase delay and costs, the existing infrastructure of the UNFCCC should be utilised.

VI. CONCLUSION

In light of the conclusions of the IPCC, the reluctance or inability of States to reduce emissions of greenhouse gases is a cause for great concern.¹⁵⁹ This article has attempted to consider the fate of the Pacific Islands in the face of escalating climate change. Adaptation to climate change is proving to be a tortuously slow process and may ultimately prove to be ineffective and / or unfeasibly expensive. The prospects of the Pacific Islands, and other SIDS, being abandoned and the islanders losing their homelands must be considered a realistic future prospect. The international community of sovereign States appears to be ill equipped to deal with the prospect of a mass migration of climate change refugees and any global agreement in relation to this issue can be expected to be fraught with difficulty. When the options are considered, it is clear that consideration of the alternatives all point to the fact that renewed efforts must be made to mitigate greenhouse gas emissions in an attempt to halt the advance of climate change.

¹⁵⁸ Should this form the focus of work for the International Law Commission?

¹⁵⁹ See Warnock, above n 96.