



**The impact of climate change on low-lying island nations: a challenge for the international community.
The case of Tuvalu's climate refugees**

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Abstract

Climate change is considered one of the major causes of migration flows. It has been estimated that by the middle of this century hundreds of millions of people will be forced to cross national borders as a consequence of sea level rise, desertification, floods, droughts (all effects attributed to global warming). The impact of climate change will be most acute for poor countries, in particular low-lying island nations whose existence is threaten by sea level rise. Particularly at risk is the small archipelago of Tuvalu in the South Pacific region which is likely to become the first country to be totally submerged by the ocean. The plight of Tuvaluans needs to be addressed urgently: people forced to leave their home lands as a consequence of climate-induced disruption should be recognised as climate refugees and resettled in safer countries. They will need more than a form of temporary protection; they should be granted a “permanent refuge” where to rebuild their lives. This work considers the lacunae of the existing legal international instruments in addressing the problem of climate displacement and proposes a new specific regime to fill these gaps. It looks at an international burden sharing system regionally implemented as the most adequate solution to ensure protection to people like Tuvaluans forced to abandon their lands as a consequence of irreversible environmental degradation.

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Chapter 1

Introduction

The increasing of global temperature -a phenomenon known as climate change- is considered one of the major causes of migration flows: in many regions of the world people will be forced to relocate within their home countries or to cross national borders as a consequence of sea level rise, desertification, floods, droughts (all effects of climate change). If the global temperature continues to rise, environmental crises will become endemic and the number of people forced to leave their homelands to seek a safer place will reach proportions that have no historical precedent. Although the exact number of future “climate refugees” is difficult to establish, observers estimates that by 2050 the number of people affected by environmental factors may increase up to 200 million. The impact of climate change will be most acute for poor countries, in particular small island developing states in the Pacific Ocean. Their extreme vulnerability to climate change depends on three main factors: their location in a region prone to natural disasters; their low elevation above the sea level; their lack of economic resources to implement adaptation projects. If the sea level continues to rise low-lying islands risk not only to lose portion of their territorial land but to be totally submerged by the ocean. The plight of sinking nation and consequent displacement of their population should be urgently addressed: islanders who suffer the adverse impacts of climate change should be recognised as climate refugees and resettled in safer countries. They will need more than a form of temporary protection; they should be granted a “permanent refuge” where to rebuild their lives.

1.1 Research questions

Forced migration from countries which will become uninhabitable as a consequence of climate change raises a series of questions. How to define the category of climate refugees? Are climate refugees adequately protected by existing legal instruments? If not, should a new legal instrument protecting this category of forced migrants be

established? Who should bear costs and responsibilities for the resettlement of people displaced permanently? The international community, individual states or other entities?

1.2 Aim of the research

The present paper highlights the lacunae of the international legal system in relation to climate displacement and the inadequacies of states' responses to the protection needs of climate refugees. As a solution to the current legal gaps and to the lack of efficient policy responses, this dissertation proposes the negotiation of a new normative framework establishing the rights of people forced to relocate permanently as a consequence of climate change and states' obligations towards this specific category of forced migrants. The aim of this work is to tailor a climate refugees regime based on an equitable burden-sharing mechanism. Since climate change is caused by greenhouse gases emissions and every country is responsible to different extent for polluting the atmosphere, the recognition of states differentiated responsibilities in relation to environmental degradation will ensure the fair distribution of the burdens of climate displacement among the international community.

1.3 Analysis

This dissertation will undertake a single case study analysis: the dramatic situation of Tuvalu, a small archipelago in the South Pacific Ocean whose existence is threaten by sea level rise. This sinking nation provides an example of a state which will be rendered uninhabitable by climate change and whose population will be forced to relocate permanently in other countries. The plight of Tuvaluans, as part of a much broader movement of people due to climate change, will help to understand:

- if climate refugees have rights that are enforceable under existing legal instruments;
- why states are reluctant to recognise and ensure protection to people forced to move from climate disruption;
- why a burden sharing system regionally implemented and internationally financed could be the most appropriate solution to address the growing phenomenon of climate displacement.

The present work is built on three levels of analysis:

- analysis of international legal instruments (namely the 1951 Convention of Geneva Related to the Status of Refugees and the United Nations Framework Convention on Climate Change) in order to clarify if existing norms provide protection to climate refugees;
- investigation of the literature on climate refugee definition and climate refugee protection. In particular the potential of Shuck's refugee burden-sharing model will be considered to address the specific issues raised by climate forced migrants in need of permanent resettlement;
- analysis of journal articles, media reports and scientific reports (in particular publications of the Intergovernmental Panel on Climate Change) to design an exhaustive picture of the dramatic conditions of Tuvalu.

1.4 Chapter outlines

This work will be divided into three main chapters:

- Chapter 2 outlines the general frame of the whole discussion about climate refugees. It highlights the link between anthropogenic factors and climate change and gives a global overview of the adverse impacts of global warming on human mobility; it illustrates the theoretical debate on the definition of climate refugees and analyses the current international norms (the refugees regime and the climate change framework) that could potentially protect people displaced as a consequence of climate change.
- Chapter 3 focuses on the effects of climate change on the inhabitants of Tuvalu. It considers the urgent need of Tuvaluans to be resettled and the response of neighbouring countries to the potential relocation of a whole population.
- Chapter 4 explores how the recognition of states international responsibilities could constitute the ground for the implementation of a burden sharing system protecting climate forced migrants. After considering the prominent approaches that emerge in the academic debate on climate refugees protection, it proposes a new mechanism of burden sharing based on two levels of cooperation (regional and international) and on the fair allocation of resettlement and financial quotas.

Chapter 2

Climate refugees and existing legal instruments: inadequacies of the international system

Climate induced displacement is a phenomenon whose proportions have no historical antecedents. As the increasing of global temperature will compel hundreds of millions of people to relocate across national borders, it is fundamental to consider if the rights of climate refugees are enforceable under existing international instruments and if states have binding obligations towards this category of forced migrants. This section illustrates the link between climate change and human mobility. Furthermore, it defines the specific category of climate refugees for which the present proposal is tailored and analyses if current international norms are adequate to address climate induced flows.

2.1 Link between climate change and displacement: a global overview

Climate change is an environmental phenomenon due to anthropogenic factors. It refers to the increasing of global temperature¹ which is “attributed directly or indirectly to human activity that alters the composition of the atmosphere”². Global warming is caused by the burning of fossil fuels and consequent release of greenhouse gases in the atmosphere for which the modern industrial society is the principal responsible. The developed world is liable for over half of the global emissions even though recent studies estimate that by 2025 some developing countries could become the world’s

¹ The global temperature has so far increased by 0.8°C relative to the pre-industrial value. If states do not diminish greenhouse gases emissions, the temperatures will rise by 2–7 °C by the end of this century. On the argument see German Advisory Council on Global Change (WBGU), *World in Transition: Climate Change as a Security Risk*, 29 May 2007, p. 6, available at: http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/hauptgutachten/jg2007/wbgu_jg2007_kurz_engl.pdf (consulted on 4 May 2011).

² United Nations Framework Convention on Climate Change (UNFCCC), adopted 29 May 1992, entered into force 21 March 1994, FCCC/INFORMAL/84 GE.05-62220 (E) 200705, art. 1, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf> (consulted on 4 April 2011).

major polluters³. The detrimental impact of climate change on human beings has been broadly documented: it will have adverse effects on ecosystem integrity, human health, economic activities and social conditions⁴. Furthermore it is likely to have a significant impact on human mobility: current estimates indicate that hundreds of people will be forced to move on temporary or permanent basis as a consequence of environmental degradation due to climate change. Although the exact number of climate migrants is difficult to predict, both academic scholars and international organisations have attempted to calculate the proportions of the phenomenon. In 1995 Myers estimated that there were already 25 million environmental refugees (a broad category including victims of climate change effects) and that this number was expected to increase exponentially⁵. More recently the author has observed that by the middle of this century 212 million people will be at risk of displacement as a consequence of climate change induced disruptions (mainly droughts and sea level rise)⁶. Alarming predictions concerning the linkage between global warming and population displacement have been highlighted also by the UN Office of the High Commissioner for Human Rights (OHCHR):

By 2050, hundreds of millions more people may become permanently displaced due to rising sea levels, floods, droughts, famine and hurricanes. The melting or collapse of ice sheets alone threatens the homes of 1 in every 20 people. Increased desertification and the alteration of ecosystems, by endangering communities' livelihoods, are also likely to trigger large population displacements⁷.

³ For example, if China continues to increase greenhouse gases emissions it will be the world's largest emitter in fifteen years. See Gillespie, 2004, p. 109.

⁴ See Gillespie, 2004, p. 111.

⁵ Myers & Kent, p. 134, 1995.

⁶ Myers, 2002, p. 609.

⁷ United Nations Office of the High Commissioner for Human Rights (UN OHCHR), *Climate Change, Migration and Human Rights*. Address by Ms. Kyung-wha Kang Deputy High Commissioner for Human Rights, Conference on Climate Change and Migration: Addressing Vulnerabilities and Harnessing Opportunities (19 February 2008) available at <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=9162&LangID=E> (consulted on 4 April 2011).

Concerns about the growing phenomenon of climate induced migration are related not only to its proportion but also to the inadequacies of institutions and legal instruments to manage the problem. It has been noticed that if global temperature continues to rise climate induced migration “could become one of the major fields of conflict in international politics”⁸. Indeed the international community lacks cooperative governance mechanisms that could grant an effective protection to climate refugees by establishing emitters responsibilities, compensation for the victims and resettlement for migrants forced to relocate. These legal gaps in addressing environmental crises may threaten global security by causing disputes over distribution of refugee burdens and compensation payments⁹.

Refugee flows environmentally driven will be provoked by three main climate-induced events: storms and cyclones; gradual sea level rise; drought, desertification and water scarcity. Desertification and droughts will have the greatest detrimental impact in Africa and Latin America, while intense storms, floods and sea level rise will affect acutely Asian regions¹⁰. The climate change effect that will probably contribute most to forced displacement is the rise of sea level. According to the International Panel on Climate Change the global sea level is likely to increase between 28 and 43 centimetres as a result of the melting of glaciers and ice caps¹¹. As a consequence, all countries with low-lying coastal areas will be under severe threats. Bangladesh for example is particularly vulnerable to the effects of sea level rise since the 80 percent of its territory is a delta¹². It has been estimated that if the global temperature continues to increase over 10 percent of the country will be submerged and more than five million people will be forced to relocate¹³. While some states will lose portions of their lands, others will become completely uninhabitable. In particular, small island nations with a low level of

⁸ German Advisory Council on Climate Change, cfr. supra footnote 1, p. 5.

⁹ Ibidem, pp. 5-6.

¹⁰ See Biermann & Boas, 2010, p. 69.

¹¹ Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001: *The Physical Science Basis*, p. 409, available at http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html (consulted on the 29 April 2011).

¹² Docherty & Giannini, 2009, p. 356.

¹³ See Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001: *Impacts, Adaptation and Vulnerability*, p. 569, available at: http://www.grida.no/climate/ipcc_tar/wg2/pdf/wg2TARfrontmatter.pdf (consulted on the 4 May 2011). On the argument see also Williams, 2008, p. 505; Docherty & Giannini, 2009, p. 356.

elevation above the sea face the risk to disappear. Islands like Tuvalu, the Maldives, Kiribati and the Marshall Islands are considered “sinking states” since even a moderate increase of sea level will submerge them and force the entire population to relocate¹⁴. Although the developing world will suffer the most acute consequences of sea level rise in terms of land loss and internal or transnational mobility, also industrialised countries risk to be affected by floods and coastal erosion. According to the European Environment Agency (EEA) coastal areas in countries such as the Netherlands, England, Denmark, Germany and Italy are already below normal sea levels and are vulnerable to inundations¹⁵. If the sea level increases a vast part of European population will be forced to relocate. It has been estimated that the impact of one meter sea level rise will compel 13 million of Europeans to move from their homelands¹⁶.

To sum up, climate change is a global phenomenon for three main reasons: it has adverse consequences on every region of the world, even if some areas are most severely affected; it involves international responsibility since every country is liable (to different extent) of GHGs emissions; it produces trans-boundary refugee flows that call for a collective response.

2.2 Definition of climate refugees

Clarifying the notion of “climate refugee” is essential in order to develop an efficient mechanism for protecting such category of migrants and identify who should bear the protection burdens of this growing phenomenon. However, defining who is a climate refugee is not a simple matter. The existing legal instruments do not explicitly address the issue of climate induced migration. For a definition of this particular category we must refer to the academic debate. Most of the authors who study the effects of global warming on human displacement consider the broader group of “environmental migrants” or “environmental refugees” rather than the more specific class of climate refugees. The first who coined the definition of “environmental refugee” was Essam El-

¹⁴ See Biermann and Boas, 2010, p. 69; Gillespie, 2004, pp. 112-113.

¹⁵ European Environmental Agency (EEA), *Vulnerability and Adaptation to Climate Change in Europe*, Technical Report n.7, 7 December 2005, available at http://www.eea.europa.eu/publications/technical_report_2005_1207_144937 (consulted on 5 May 2011).

¹⁶ *Ibidem*, p. 22.

Hinnawi, a researcher for the United Nation Environmental Programme. He describes this group of migrants as:

Those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life¹⁷.

By “environmental disruption” he means:

any physical, chemical, and/or biological changes in the ecosystem (or resource base) that render it, temporarily or permanently, unsuitable to support human life¹⁸.

This broad definition makes no distinction between the various subsets of environmental migrants. Indeed El-Hinnawi includes in his description both people forced to move from “natural” catastrophes and people flowing from disruptions due to anthropogenic factors; both environmental refugees in need of temporary protection and refugees in need of permanent resettlement; both migrants who are compelled to move because of a drastic and sudden disaster and migrants whose departure is caused by long term environmental degradation.

Nevertheless, the theoretical debate on environmental flows that developed after El-Hinnawi report has been aimed at distinguishing the various components of the phenomenon. Bates for example classifies environmental refugees in three subcategories based on the characteristics of disruption¹⁹. She makes a distinction between “disaster refugees” who move from acute events caused by natural factors or technological accidents; “expropriation refugees” fleeing from acute anthropogenic disruptions that intentionally relocate people (namely wars or economic development); “deterioration refugees” who leave their homes as a result of human induced gradual

¹⁷ El-Hinnawi, 1985, p. 3.

¹⁸ Ibidem, p. 4.

¹⁹ Bates, 2002, p. 469.

degradation of the ecosystem. Although she does not explicitly refer to climate refugees, they can be included in the third group since they flee from progressive deterioration of the environment (coastal erosion, desertification, submersion of lands) due to anthropogenic factors. Furthermore, she stresses the difference between “environmental refugees” and “environmental emigrants”. The former ones would be compelled to flow while the latter ones would move voluntarily to ameliorate their life conditions. This theoretical division corresponds to the legal distinction between refugees who are forced to migrate owing to a well founded fear of persecution and (economic) migrants who move as a consequence of a “free choice” to enhance their life opportunities. According to International Law these two categories of needy migrants are entitled to different levels of protection even though they both lack basic rights and fundamental freedoms. Indeed refugees can claim asylum in destination countries and their rights are protected by the 1951 Convention of Geneva; migrants who move for economic related reasons are not protected by a framework similar to the refugee regime and their right to move in another country is subjected to the absolute discretion of the receiving state. Such classification has dangerous consequences: refugees are considered “more vulnerable migrants” that need to be admitted in another country, while “voluntary migrants” are perceived as a threat to national security whose freedom of movement should be limited. In the contest of environmental migrations it is not easy to distinguish between voluntary departure and forced migrations. Bates suggests that environmental refugees are people who have absolutely no control over their relocation since they move from a sudden event, while environmental migrants are people who flow as a consequence of a gradual degradation of their homelands²⁰. She supports this view through various examples. People forced to leave their homes because of an acute disruption (such as a volcano eruption) can be considered “forced refugees”, while people who are affected by gradual environmental change (such as progressive desertification) may be classified as voluntary migrants. In this latter case people will have the opportunity to decide if to leave or not. She suggests that if the environmental crisis can be solved through mitigation interventions and adaptation measures, the population affected may choose not to abandon the territory. The distinction between voluntary and involuntary

²⁰ Ibidem, p. 468.

displacement has been adopted also by a study of the UN University Institute for Environment and Human Security. This study distinguishes between “forced environmental migrants” (who are compelled to leave their homes because of an environmental stressor) and “environmentally motivated migrants” (who may decide to move because of an environmental stressor)²¹. On one hand, these sub-classes could be useful to prevent and address the push factors of environmental migration and to develop different assistance strategies for each group. Indeed forced environmental migrants need to be temporary or permanently resettle, while environmentally motivated migrants may require other kind of assistance such as sustainable development strategies to rehabilitate a damaged ecosystem. On the other hand, although this theoretical distinction can be useful to deploy different policies, most of the time it is difficult to determine whether people flow by choice or by force²². The distinction between environmental refugees who are forced to move from sudden and acute events and environmental migrants who face the progressive degradation of a territory does not give a realistic picture of climate induced flows. Moving from a territory which is affected by gradual degradation is not always an act of free choice: progressive desertification or gradual submersion of lands are examples of environmental events that “force” people to relocate from unbearable conditions. Furthermore, the criterion of voluntariness used to classify environmental displaced can lead to downgrade the standards of protection for migrants who “opt” to leave. As explained before, the traditional legal distinction between “forced” refugees and “voluntary” economic migrants determines a lower level of protection for the latter group. In the context of environmental displacement, stressing the difference between voluntary and involuntary movement could create different standards of protection between “first class migrants” (climate refugees) and “second class migrants” (climate migrants). Another way to classify people affected by environmental disasters is by making a distinction between migrants forced to relocate within their home state and migrants who cross national borders to seek protection in a safer country. This distinction reflects the difference in International Law between refugees and internally

²¹ Renaud et al., 2007, p. 11.

²² Biermann & Boas, 2010, p. 65.

displaced persons (IDPs)²³. According to the 1951 Convention of Geneva Related to the Status of Refugees, crossing national borders is one of the fundamental criteria to claim the refugee status. In the debate on environmental migrants some scholars extend the definition of environmental refugee to IDPs. Myers for example describes environmental migrants as “people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems”²⁴. He includes in his definition not only cross boundary migrants but also internally displaced persons who are unwilling or unable to abandon their countries.

Other authors claim for a less inclusive definition. Docherty and Giannini for example, propose the creation of a new legal framework to address the issues of people forced to cross national borders as a consequence of climate change. Although they recognise that all the victims of environmental harm may deserve international assistance²⁵, they tailor a protection regime which excludes internally displaced persons. Furthermore, they refer to a particular subcategory of environmental migrants: climate refugees. They do not consider the broader phenomenon of environmental displacement and define climate refugees as people who are compelled to leave their home countries as a consequence of climate change, an “anthropogenic phenomenon for which the international community should be held morally and legally responsible”²⁶. Not many studies explicitly address this latter category. Bell for example refers to global warming as one of the major causes of displacement but he does not differentiate between climate change induced migrants and the broader group of environmental refugees²⁷. On the contrary, Biermann and Boas in referring to climate refugees advance a more articulated definition motivated by political reasons and practical needs. Indeed, since climate change is a human-induced global phenomenon, it calls for the recognition of political liability, international responsibility and compensation. The definition used by the authors

²³ The refugee framework does not cover internally displaced persons. IDPs are protected by the UN Agency for refugees (UNHCR) that has extended its mandate to people forced to move who cannot claim the refugee status.

²⁴ Myers, 2002.

²⁵ Docherty & Giannini, 2009, p. 361.

²⁶ Ibidem.

²⁷ See Bell, 2004, p. 136.

addresses both the root causes of migration (the type of environmental harm) and the type of migration. They describe environmental refugees as “people who have to leave their habitats, immediately or in the near future, because of sudden or gradual alterations in their natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, drought and water scarcity”²⁸. This definition includes both voluntary and forced migrants, transnational and internal displaced, migrants in need of temporary or permanent protection²⁹.

The present work addresses climate induced flows as part of the broader phenomenon of environmental migration. It proposes a narrow definition of climate refugees as victims of irreversible progressive environmental degradation for whom transnational migration and consequent relocation in another country is the only possible option. Thus, it excludes two groups of people that can be considered “climate victims”. The first restriction concerns people affected by climate change related disruptions who are unable or unwilling to cross national boundaries to move to a safer place (“climate internally displaced persons”). The second restriction excludes individuals injured by environmental harms whose displacement can be avoided through adaptive measures or precautionary strategies. These limitations are not aimed at distinguishing different levels of protection but at differentiating the type of assistance. All climate victims require support from the international community but while transnational refugees need temporary or permanent resettlement in a safer country, people who do not cross national borders need international protection within their home countries (humanitarian aid, development assistance). Furthermore, even if the mitigation of emission levels and adaptation projects are fundamental strategies to prevent climate induced relocation, they are not sufficient responses to vulnerable countries irremediably compromised by climate change.

The category of refugees considered in this work needs a further specification: I will refer mainly to climate refugees in need of permanent resettlement. Although the difference between permanent and temporary protection is not relevant from the point of view of international shared responsibility, people whose land will become irreversibly

²⁸ Biermann and Boas, 2010, p. 67.

²⁹ Ibidem, p. 64.

uninhabitable or (in the worst case scenario) will cease to exist need particular consideration. People moving from sinking island nations offer an example of climate refugees forced to flee as a consequence of progressive (irreversible) environmental degradation due to climate change. They do not need to be “hosted” in a new place. Since they will be deprived of the right to return to their homelands they need a “new home” where to rebuild their lives.

2.3 Gaps in the current international legal system

After having determined who may be classified under the definition of climate refugees this work can proceed by analysing if current legal frameworks provide protection to this category. The growing number of climate refugees represents a challenge for the international community since the existing legal instruments do not explicitly address the specific needs of people forced to move from climate induced disasters. This section examines the normative gaps in the international system by focusing on two frameworks that could potentially offer a solution to the problem: i) the refugee framework; ii) the climate change regime.

i) The refugee framework

The current refugee regime is based on the 1951 Convention of Geneva, a key legal document defining who is a refugee, refugee rights and states legal obligations. Although the Convention is considered the cornerstone for the protection of individuals seeking asylum, its mandate does not cover the vast majority of people fleeing from unbearable conditions. This work will consider three main protection gaps: a) the narrowness of the definition (*definition constrain*); b) the broad discretion left to states in deciding who to admit within their borders (*discretion constrain*); c) the lack of coordination among states in addressing refugee flows (*unilateral approach constrain*).

a) The definition constrain

The 1951 Convention defines a refugee as someone who:

“owing to 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, is 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”³⁰.

This definition protects mainly political refugees that flee from their country of origin because of persecution based on one of the five convention grounds (race, religion, nationality, political opinion, particular social group). It does not consider the major sources of refugee flows: economic deprivation, wars, conflicts, floods, drought or famine³¹. Thus people who are forced to move from environmental disruptions, including climate induced migrants, are not covered by the refugee regime. This consistent lacuna within the refugee protection system can be explained by contextualising its creation. Indeed the official definition reflects the particular historical context in which the 1951 Convention was created. The Convention was adopted as an ad hoc solution to deal with the specific situation of European displaced population in the Post World War II era. Then during the Cold War it was used by Western states as an ideological instrument for granting protection to political dissidents from the Soviet Union³².

Beyond the restrictions deriving from the limited reasons of persecution, the official definition presents a second consistent limit: it does not recognise protection to people who flee in groups. Indeed the 1951 Convention offers a definition which is “essentially individualistic”³³: the refugee has to be the direct object of the persecution and asylum claims have to be verified case by case. People moving from objective pressing threats

³⁰ Convention of Geneva Relating to the Status of Refugees, adopted by the UN General Assembly on 28 July 1951, entered into force on 22 April 1954, GA Res. 429 (V), art. 1(2)A, available at <http://www.unhcr.org/pages/49da0e466.html> (consulted on 4 April 2011).

³¹ Goodwin Gill, 1996, p. 3.

³² For the role played by the historical context in the drafting of the 1951 Convention see Hong, 2001, p. 341; Hathaway, 1991, pp. 6-10.

³³ Goodwin Gill. 1996, p. 8.

such as environmental degradation do not meet the Convention requirements since they are not individually persecuted. Therefore climate refugees that generally move in large groups to seek for a safer place are not protected by the official definition.

A more inclusive definition of refugee have developed at regional level. Two regional agreements concerning refugees (the 1969 OAU Convention adopted by African states and the 1984 Cartagena Declaration adopted by Central American states) have extended the protection to people fleeing in groups from “events seriously disturbing public order”³⁴. Although it has been claimed that extending the protection to refugees fleeing from circumstances of generalised danger may allow people moving from environmental disasters to claim asylum, these two frameworks do not explicitly address the needs of climate refugees³⁵.

b) *The discretion constrain*

A second limit of the refugee regime is the broad discretion left to states in deciding which categories of forced migrants to admit. Although the Universal Declaration of Human Rights establishes that “everyone has the right to seek and to enjoy asylum from persecution”³⁶, the 1951 Convention does not provide any binding obligation for states to grant refuge to asylum claimants. In other words, the individual right to seek protection in other countries does not correspond to state duty to admit potential refugees and grant them asylum. Most states use their discretion to limit the number of forced migrants within their territories and shift refugee burdens towards other countries. Although state right to decide who to admit or reject is limited by the principle on *non-refoulement*³⁷ -the obligation not to return a refugee in territories where his life or freedoms would be threatened- recent episodes of forced repatriation and

³⁴ See Organisation of African Unity (OAU), Convention Governing the Specific Aspects of Refugee Problems in Africa, adopted by the Heads of African State and Government on 10 September 1969, entered into force on 20 June 1974, art. 1.2, available at http://www.africa-union.org/Official_documents/Treaties_%20Conventions_%20Protocols/Refugee_Convention.pdf (consulted on 11 April 2011); Cartagena Declaration on Refugees, adopted by the Colloquium on the International Protection of Refugees in Central America, Mexico and Panama, 22 November 1984, art.III. 3, available at <http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?page=search&docid=3ae6b36ec> (consulted on 12 April 2011).

³⁵ On the argument see Cooper, 1998, pp. 496-499.

³⁶ Universal Declaration of Human Rights, adopted by the UN General assembly on 10 December 1948, GA Res. 217 A (III), art. 14, available at <http://www.ohchr.org/en/udhr/pages/introduction.aspx>.

³⁷ Convention of Geneva Relating the Status of Refugee, cfr. supra footnote 30, art. 33.

summary expulsion confirm states reluctance to open their borders to newcomers. Indeed receiving states have adopted various strategies to prevent the entrance of asylum seekers and circumvent the principle of *non-refoulement* (readmission agreements with source countries, expulsion of asylum claimants fleeing from “safe third countries”, interception of migrants in transit, visa requirements, imposition of carrier sanctions on transport companies). Furthermore, they try to limit the presence of asylum seekers within their territories by distinguishing between migrants and refugees: asylum claimants that cannot demonstrate a strict adherence to the 1951 Convention may be returned (*refoulé*) to the source countries. If destination countries, mainly wealthier states, use their discretion to interpret the Convention definition narrowly and deny protection to traditional refugees, they are unlikely to admit and assist new groups of forced migrants such as climate refugees. Climate refugees may be included in the generic category of migrants and forced back to the areas where their rights are jeopardised.

c) *The unilateral approach constrain*

Although the Preamble of the 1951 Convention states that “the grant of asylum may place unduly heavy burdens on certain countries” and that “a satisfactory solution cannot be achieved without international cooperation”, there is no effective coordination among states in addressing refugee flows. Each state of destination decides for itself how to interpret the refugee definition and which categories of forced migrants to admit. Furthermore, once individual migrants or group of migrants have been admitted within the host state, protection standards and procedures to determine the refugee status vary from one country to another. This lack of coordination generates an unbalanced distribution of costs and responsibilities among the international community. States of the South linked by proximity to the traditional source countries become countries of first asylum and have to bear the heaviest burdens of dealing with large scale migration flows, while wealthier states that are most capable of addressing refugees emergencies lack the political will to admit and assist forced migrants. This unbalanced situation risks to be exacerbated by refugee flows related to climate change. Since the poorest regions of the world (mainly African and Asian countries) are the most affected by

global warming and forced migrants generally seek asylum in countries linked by proximity to the home state, developing countries risk to bear the whole protection burden of hundreds of millions of climate refugees. This alarming provision cannot be adequately addressed by the current refugee framework since the principle of international cooperation stated in the 1951 Convention remains a moral exhortation without legally binding effect. There is the need to establish a binding system based on costs and responsibilities sharing for distributing more equally the protection of forced migrants.

ii) *The climate change legal framework*

The climate change regime based on UN Framework Convention on Climate Change is a second legal system that could potentially tackle the problem of climate refugees. The Convention recognises global warming as an anthropogenic induced phenomenon that threatens environmental integrity. Its main aim is to fight the increase of global temperature by reducing the level of greenhouse gases in the atmosphere. The UNFCCC acknowledges the principle of “common but differentiated responsibility”³⁸: all countries are liable for contributing to climate change even though the heaviest burden of preventing global warming should be placed on developed countries which are the largest emitters of greenhouse gases. Industrialised states are asked not only to diminish the emissions but also to provide financial resources in order to implement the Convention goals³⁹. Although the UNFCCC is aimed at protecting “the climate system for the benefit of present and future generations of humankind”⁴⁰, it presents some limits in addressing the issue of climate refugees: a) it is focused on preventive measures rather than remedies for protecting victims of environmental disruptions (*aim*

³⁸ United Nations Framework Convention on Climate Change (UNFCCC), adopted 29 May 1992, entered into force 21 March 1994, FCCC/INFORMAL/84, art. 3, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf> (consulted on 4 April 2011).

³⁹ *Ibidem*, Art. 11.

⁴⁰ *Ibidem*, Art. 3.1.

constrain); b) it does not establish states' obligations towards individuals (*gaps in protecting individual rights*).

a) *Aim constrain*

The climate change framework clarifies its main objective by stating that the signatory states “should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects”⁴¹. These preventive strategies include the stabilisation of greenhouse gases emissions, the promotion of sustainable development, the transfer of technologies to reduce the atmosphere pollution, the promotion of public awareness on climate change issues. Although the Convention recognises that global warming can harm the world population by posing “threats of serious or irreversible damage”⁴², it does not mention human mobility as one of the consequence of climate change. Therefore, it does not establish remedial measures (such as temporary or permanent relocation) for people forced to move as a consequence of environmental disruption. The only remedial action provided by the UNFCCC is the deployment of adaptation measures in order to rehabilitate areas affected by desertification, droughts and floods⁴³. However, facilitating adaptation measures is not a sufficient solution to address the needs of people whose home place is irremediably compromised (such as climate refugees whose lands are sinking as a consequence of sea level rise).

b) *Gaps in protecting individual rights*

The second constrain of the UNFCCC is the lack of reference to individual rights⁴⁴. Unlike International Human Rights Law, the climate change regime does not establish state obligations towards individuals (negative duties not to interfere with fundamental freedoms and positive duties to protect and fulfil basic rights). Although the Convention recognises the responsibilities of polluter states for causing the increase of global temperature and related environmental harms, it does not emphasise the role of the state

⁴¹ Ibidem, Art.3.3

⁴² Ibidem, Art. 3.3

⁴³ Ibidem, Art 4.1(e)

⁴⁴ On this argument see Docherty & Giannini, 2009, p. 396.

as a duty bearer towards people whose fundamental rights are threatened by climate induced degradation. This legal framework concerns mostly state to state relations⁴⁵. States (especially the largest emitters of GHGs) have obligations towards other states to mitigate anthropogenic emissions; they do not have the duty to minimise injuries to people⁴⁶. Furthermore, the climate change framework does not provide an enforcement mechanism (such as a monitoring body) to ensure effective access to justice for victims of environmental harms. In case one of the Party does not comply with its obligations under the UNFCCC, the Convention provides the settlement of disputes between states not between states and individuals. Regarding possible disputes concerning the interpretation or implementation of the Convention, the climate change regime recognises the recourse to arbitration or to the International Court of Justice for the states involved. It does not propose any remedial actions for individuals or groups of individuals whose rights have been violated as a consequence of climate induced degradation.

2.4 Protection of climate refugees: expansion of existing legal regimes or a new framework?

There is a lively academic debate about the protection of climate refugees. Although there is a wide consensus on the lacunae of the existing international instruments, scholars propose reform options oriented in opposite directions. While some authors argue that a broad interpretation or the amendment of the current regime protecting refugees could ensure an adequate protection to people forced to move from environmental harms, others suggest to establish a new legal system to address the issue of climate refugees. This section examines possible reform options aimed at expanding the mandate of the refugee framework.

Part of the literature claims that people moving from climate induced disasters are entitled to claim asylum on the same legal grounds invoked by political refugees

⁴⁵ Ibidem, p. 358; see also Osofsky, 2005, pp.75-78.

⁴⁶ Osofsky, 2005, p. 78. According to the author “international environmental law primarily focuses on environmental damage rather than on its impact on human beings”.

protected by the 1951 Convention of Geneva⁴⁷. As shown before, the official definition protects individuals who flee from political persecution; it does not explicitly cover refugee flows which are environmentally driven. However it has been claimed that some aspects of the 1951 Convention may allow environmental refugees to be included in the Geneva protection system. One of the aspects that can be used to extend the protection to climate refugees is the requirement of persecution. The term “persecution”, one of the core notion of the Convention, remains a vague concept opened to various interpretations⁴⁸. Some scholars have proposed to link the term to the violation of fundamental rights and freedoms: every individual whose basic rights (such as life, health, adequate standards of living conditions) are threatened should be entitled to receive the protection provided by the refugee regime⁴⁹. According to this argument environmental degradation would be regarded as a form of persecution since it harms people’s life and health to such an extent that they feel compelled to move from unbearable conditions⁵⁰. Therefore, the extension of the official definition to climate refugees may be considered an “extension of human rights policy”⁵¹. Since the Convention relies on fundamental freedoms deriving from the Universal Declaration of Human Rights (freedom of association, freedom of religion, freedom from discrimination)⁵², the incorporation of further human rights notions (such as right to life,

⁴⁷ See Hong 340-341, 2001; See also Cooper, 1998.

⁴⁸ See United Nations High Commissioner for Refugees (UNHCR), Handbook on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol Relating to the Status of Refugees, 1992, par. 51-53, available at <http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?page=search&docid=3ae6b3314>.

⁴⁹ Hathaway, 1991, p. 102.

⁵⁰ Simms, 2003, p. 36. The author claims that the refugee regime should be expanded by incorporating the notion of “environmental persecution” in the Geneva Convention.

⁵¹ Cooper, 1998, p. 388. The author suggests that the inclusion of further human rights proclaimed in the Universal Declaration of Human Rights (right to life, health, livelihood) and in both the Political and Economic Covenants (right to full and free utilisation of natural wealth and resources) could enable environmental refugees to meet the requirements of the 1951 Convention. She claims that a broader interpretation of the official definition might extend the protection to any person who flee from “degraded environmental conditions threatening his life, health, means of subsistence or use of natural resources”. For a similar argument see Duong, 2010. The author highlights the adequacy of international human rights law to address the needs of environmental refugees. She proposes two possible solutions to protect environmental victims: the incorporation of additional human rights provisions in the official definition; the direct recourse to human rights treaty bodies to address environmental violations. Against this latter argument see Moberg, 2009, p. 1116.

⁵² The refugee definition emphasises these five freedoms by stating that the refugee status can be claimed by individuals persecuted for reasons due to race, nationality, religion, membership in a particular social group, political opinions.

health, adequate standards of living, use of natural resources)⁵³ in the definition would be regarded as a “natural” addition⁵⁴. A second argument used to include people affected by environmental disruption in the refugee regime is the linkage between persecution and state accountability. By stating that a refugee is someone who is unable or unwilling to avail himself of the government protection, the 1951 Convention emphasises the role of the home state as a duty bearer. Indeed each state is responsible to respect, protect and fulfil human rights obligations. Any violation of human rights, no matter whether committed by direct state action or performed by non state actors, can be considered a persecutory act that provides the ground for a request of asylum. According to this view, environmental degradation caused by government actions or government negligence to protect the ecosystem from third parties could be regarded as a form of persecution that entitles forced migrants to claim the refugee status⁵⁵. There are many examples of environmental harms that involve the responsibility of the source country: degradation due to development projects, technological disasters, environmental disruption due to state unwillingness to enact adaptation measures. In these situations the government liability is evident and the home state can be held responsible for not respecting and protecting fundamental rights. Thus, people forced to move from government- induced environmental disruption can be considered asylum seekers in need of international protection since they cannot avail themselves of the protection of their country of origin. While this argument can be used to include certain categories of environmental migrants in the conventional definition, it is unlikely to extend the refugee protection system to climate refugees. Indeed the 1951 Convention establishes a link between persecution and the refugee country of origin: the home state is the main responsible for the harms suffered by individuals. In other words,

⁵³ Basic rights that implicitly refer to freedom from unbearable environmental conditions. See Cooper, 1998, p. 492; see also Keane, 2004, p. 215.

⁵⁴ On the argument see Cooper, 1998, p. 488.

⁵⁵ Ibidem, p. 502. The author considers environmental degradation a form of persecution that involves state responsibility. She suggests some examples of environmental crises that have generated refugees in satisfaction of the persecution requirement of the Convention definition: the African Sahel Desertification where the governments “persecuted” their people by choosing not to take further steps to prevent the desertification; the Chernobyl disaster where the government of the Soviet Union “persecuted” its people by causing the nuclear power plant explosion and by allowing the subsequent degradation of the area. See also Hong, 200, p. 339. The author suggests to reinterpret the requirement of persecution in order to include environmentally displaced persons who lack the protection of their home states.

persecution is considered a violation perpetrated by the refugee country of origin. In the context of environmental harms induced by climate change the home state is not the (sole) principal responsible. Since each country contributes to some extent to greenhouse gases emissions, the international community should be held responsible of persecution (understood as human-induced environmental degradation). Therefore climate refugees are not “persecuted” by their own state but by all the countries that refuse to prevent and mitigate the phenomenon of global warming.

A third argument that could be used to extend the Convention protection to victims of environmental degradation is the recognition of climate refugees as members of a particular social group⁵⁶. The belonging to a “particular social group” is one of the five reasons of persecution specified in the official definition. People who meet this requirement have immutable characteristics (similar background, habits or social status)⁵⁷. This ground of persecution has been used to ensure protection to victims not explicitly mentioned in the refugee framework: for example women who face harsh or inhuman treatment on account of their gender (understood as an immutable characteristic) may be considered a particular social group⁵⁸. In the case of climate refugees their inclusion in a “particular social group” object of persecution is more problematic since there is no specific reason for which they are discriminated and oppressed⁵⁹.

While some of the core elements of the refugee definition (mainly the notion of persecution and the human rights approach) may be open to interpretation and offer the possibility to climate change refugees to be included in the Convention definition, governments and international organisations have shown their reluctance to extend the refugee framework. As mentioned before, states lack the political will to open their borders in order to admit additional refugees. If they use the weaknesses of the Geneva system to reject traditional (political) refugees they are unlikely to extend the mandate

⁵⁶ See Cooper, 1998, p. 521.

⁵⁷ See Hong, 2001, p. 343.

⁵⁸ United Nations High Commissioner for Refugees (UNHCR) EXCOM Conclusion n. 39 (XXXVI), 1985 available at <http://www.unhcr.org/3ae68c43a8.html> (consulted on 10 April 2011).

⁵⁹ Hong, 2001, p. 343. Against this argument see Cooper, 1998. The author claims that climate refugees constitute a particular group since they fear persecution on account of a common reason: they “lack the political power to protect their own environment”.

of the 1951 Convention to other groups of forced migrants. Containment measures adopted by destination governments and attempts to circumvent International Refugee Law reflect the growing anxieties of the host communities towards “undesirable outsiders”. Indeed the population of receiving countries perceives migration inflows as a potential threat to national welfare, state security, social cohesion and cultural identity. While these fears have always been directed towards economic migrants (accused to overwhelm national resources and increase the competition for job positions), recently host societies have developed feelings of intolerance also towards refugees⁶⁰. Although refugees are generally considered “more vulnerable” migrants in need of international protection, destination states do not hide their new idiosyncrasy towards asylum seekers. Would-be refugees are labelled by media and politicians as “clandestine migrants” who claim asylum even if they do not meet the requirements of the refugee regime. They are considered as criminals who try to enter illegally in receiving countries in order to enjoy undeservedly the benefits deriving from the 1951 Geneva Convention. Thus, the expansion of the current refugee regime would be regarded as an attempt to open the “refugee floodgate”⁶¹ to massive migration flows.

Also international organisations such as the UN High Commissioner for Refugees (UNHCR) seem reluctant to extend the Convention mandate to climate refugees. Although UNHCR recognises the link between climate change and transnational mobility, it has shown a serious reluctance to use the term “refugee” for people who move from environmental degradation since environmental factors are not considered grounds for the grant of refugee status under the Geneva system. The UN refugee Agency has expressed its concerns for a possible amendment of the refugee definition: the renegotiation of the 1951 Convention would lead to lower the protection standards for refugees and undermine the international refugee protection regime⁶². The UNHCR persistence to use the term “environmental displaced” in referring to people forced to

⁶¹ Williams, 2007.

⁶² United Nation High Commissioner for Refugee (UNHCR), *Climate change, natural disasters and human displacement: a UNHCR perspective*, October 2008 available at <http://www.unhcr.org/refworld/pdfid/492bb6b92.pdf> (consulted on 15 April 2011).

move from climate disruptions indicates the unwillingness to extent its mandate to climate refugees.

Since the Refugee Convention has proven to be inadequate to cover new categories of refugees and its expansion has to face the opposition of governments and international organisations, there is the urgent need to establish a new legal framework to fill the protection gaps of the current refugee framework. Proposals for a new mechanism for the protection of forced migrants fleeing from irreversible climate induced degradation will be advanced in Chapter 4.

Chapter 3

Tuvalu: a sinking nation

3.1 Consequences of climate change on Tuvalu

The previous chapter provided an overview of global climate change displacement and illustrated the gaps of current international norms that could potentially protect climate refugees. Given this general frame, this chapter will proceed by examining a specific case study. The case of Tuvalu's inhabitants compelled to move from their country as a consequence of climate change related sea level rise and extreme weather events can be regarded as an example of climate refugees in need of international protection.

Tuvalu (formerly known as Ellice Islands) is a small island developing state in the Southern Pacific, consisting of three islands and six atolls. It differs from other islands in the Pacific Ocean (such as Solomon Islands, French Polynesia) for its low elevation above the sea level⁶³: the maximum altitude of Tuvalu is 5 meters above the sea. As a consequence of its low elevation and its geographical position (an area prone to natural disasters), the country is considered particularly vulnerable to climate change related sea level rise and extreme weather events⁶⁴. Recent studies predict that Tuvalu may become the first populated nation to be totally submerged by the ocean due to the adverse impact of global warming⁶⁵. If this alarming predictions come true, more than 11.000 people will become "stateless" and will be forced to relocate permanently in another territory. Although there are disagreements within the scientific community about the possible consequences of climate change in the Pacific region⁶⁶, it has been estimated that if greenhouse gases are not reduced, the global temperature will increase between

⁶³ See Barnett & Campbell, 2010, p. 23.

⁶⁴ Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 690 available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter16.pdf> (consulted on 12 May 2011).

⁶⁵ It has been estimated that Tuvalu will be submerged by 2054. On the argument see Corlett, 2008, p. 14; Jacobs, p. 107, 2005; Duong, 2010, p. 1239.

⁶⁶ Corlett, 2008, p. 23; Barnett & Campbell, 2010, p. 4.

2°C and 6°C⁶⁷ causing a sea level rise of 88 cm by 2100⁶⁸. Even in the case emissions diminish by 2020, a sea level rise of 14 to 32 centimetres is very likely⁶⁹. Considering that the most of the land area is less than one meter above the sea level, it is no difficult to estimate that this country will be partially (if not entirely) submerged. Tepuka Savilivili, a small Tuvalu's island can be considered a warning sign of the dramatic impact of climate change on the country's ecosystem⁷⁰. Indeed, after having experienced several inundations that destroyed its vegetation, the island was totally submerged in 1997⁷¹. Another signal of global warming is the increase in intensity and number of extreme weather events. Although Tuvaluans had always faced the threats posed by natural events typical of the tropical region, the occurrence of storms, cyclones, king waves, floods has become more frequent⁷².

Even if Tuvalu will not be swallowed by the ocean its habitability may be threaten irreversibly by coastal erosion, droughts, inundation, destruction of primary resources. In order to better understand the adverse effect of climate change that Tuvalu is already suffering it is necessary to consider the structure characteristics of the atolls and the economic development of this nation.

Regarding the first issue, atolls have particular physical characteristics due to their geological formation. They have a porous coral substructure that allows water to permeate⁷³. If the sea level continues to rise, also the water below the surface rises causing frequent floods and the salinisation of the soil. Thus, Tuvalu's inhabitants have to protect themselves not only from inundations coming from the seawater surrounding the islands but also from seawater coming from the ground. A second aspect deriving from the atolls geological formation is the natural freshwater lens that constitutes a substantial supply of drink water in times of drought. Since the sea level is increasing, Tuvaluans are facing potable water shortage due to coastal erosion (that reduces the

⁶⁷ Ibidem, p. 13; Connell, 2003, p. 90.

⁶⁸ Intergovernmental Panel on Climate Change (IPCC), cfr. supra footnote 13, p. 644.

⁶⁹ See Mason, 2009.

⁷⁰ There is no consensus about the submersion of Tepuka Savilivili as a consequence of climate change induced sea level rise. Some researchers affirm that it is in the nature of the atolls to constantly change its shape and elevation. On the argument see Connell, 2003, p. 100.

⁷¹ See Duong, 2010, p. 1239.

⁷² Ibidem; Jacobs, 2005, p. 106.

⁷³ Corlett, 2008, pp. 18-19.

volume of the lens) and sea water intrusion in the lens (that renders the water undrinkable)⁷⁴. Furthermore, it is in the nature of the atolls to be surrounded by coral reefs that protect the lands from high waves. If the global temperature increases the formation of the coral reefs may be at risk. Indeed the reef structure is composed by the skeleton of polyps, a marine species that cannot survive if the sea temperature rises more than 2°C. As a consequence of coral reduction Tuvalu is likely to lose its natural barrier against the force of the ocean.

Regarding the second issue, it is important to spend some words about the economic situation of the nation. Indeed the vulnerability of Tuvalu depends not only on the extent to which the integrity of the environment is threaten by climate change but also on the extent to which economic activities rely on the ecosystem. Furthermore the economic growth of a country determines its capacity to adapt to climate change impacts and its influence in climate change fora. Thus, developing countries like Tuvalu raise more concerns since they do not have the economic resources and technologies to afford the high costs of adaptation measures and lack the political power to call for the global reduction of GHGs emissions during international negotiation. On the contrary, wealthier states like United States -that is the most responsible country for polluting the atmosphere⁷⁵- have high adaptive capacity and great political authority in decisions related to climate change mitigation.

United Nations data, based on gross national income (GNI) and economic vulnerability index (EVI), describe Tuvalu as a Least Developed Country⁷⁶. Its economic growth is limited by demographic smallness and isolation from international markets combined with environmental stresses. The most part of its income derives from revenues sent from nationals working abroad, fishing license fees, the selling of its national internet

⁷⁴ See Barnett & Campbell, 2010, pp. 12-13; Mason, 2009.

⁷⁵ The United States are responsible for over 30 percent of greenhouse gases emissions. On the argument see Barnett & Campbell, 2010, p. 10.

⁷⁶ See United Nations Conference on Trade and Development (UNCTAD), *Vulnerability profile of Tuvalu*, 29 January 2009, available at http://www.un.org/en/development/desa/policy/cdp/ldc/profile/vulnerability_profile_tuvalu.pdf (consulted on 10 May 2011). The GNI per capita corresponds to \$2,544 and it is mainly a result of remittances sent from migrants working overseas. The EVI reveals to which extend the country is affected by the consequences of climate change.

suffix. Considering that the GDP corresponds to US\$ 15 million⁷⁷, Tuvalu has not enough funds to implement adaptation projects. Furthermore, its key subsistence activities, agriculture and fisheries, are severely affected by climate change related factors (such as warming of sea waters, coastal erosion, land loss, salinisation of the soil and water supplies). The intrusion of salt water in arable lands has undermined the growth of crops and palm plantations with dramatic consequences for subsistence food. On the other hand the increase in ocean temperature and level is likely to undermine the marine ecosystem viability. Indeed species diversity is predominant in shallow waters rather than in depth waters and many species are vulnerable to sea temperature changes⁷⁸.

Therefore, Tuvalu's scarce adaptation capacity and economic constrains deriving from environmental degradation will render life conditions unbearable and force the islanders to relocate in another country. However, it can be claimed that the "question of habitability is subjective" and that it is not easy to determine if and when the environment may threaten people survival. Indeed human beings have adapted to live in extreme adverse situations such as ice or desert regions. Nonetheless, there are objective criteria to establish if a territory is habitable. The human rights lens could be an adequate response to the question: how can be determined if the population of a specific country has no other option than fleeing in a safer place?

In the case of Tuvaluans it is evident that if their nation ceases to exist they will lose a fundamental right which is the basis for the enjoyment of other rights: their belonging to a national territory. Indeed, even if human rights are universal and individuals are entitled to protection regardless of their nationality, still international human rights law is based on state sovereignty. States have a primary role in protecting individuals and stateless persons have less guarantees than citizens (for example they are not granted the same level of political rights). The human rights approach can be useful also to examine the conditions that will lead to Tuvaluans' displacement even in the case the country

⁷⁷ See Barnett & Campbell, 2010, p. 7; see also Central Intelligence agency (CIA), *The world Factbook: Tuval*, May 2011 available at <https://www.cia.gov/library/publications/the-world-factbook/geos/tv.html> (consulted on 4 May 2011).

⁷⁸ Tuvalu Ministry of Natural Resources, Environment, Agriculture and Lands, Department of Environment, *Tuvalu's National Adaptation Programme of Action (NAPA)*, 2007, pp. 29-30 available at <http://unfccc.int/resource/docs/napa/tuv01.pdf> (consulted on 4 May 2011).

will not be swallowed by the ocean. Indeed, even if a distinct right to a healthy environment has not been codified yet⁷⁹, there are alienable rights (right to life, health, food, water, property) that the islanders risk to lose as a consequence of climate change effects. The enjoyment of these rights depends on the protection of environmental integrity. For example, the right to health may be seriously compromised by global warming. Indeed there is a link between the increase of temperature and the proliferation of insects that carry diseases like malaria or dengue. Furthermore, increases in the frequency of extreme weather events such as storms and floods are likely to provoke injuries and deaths. The right to health is closely associated to the right to food and the right to water. Also these fundamental rights are under threat as a consequence of climate change. As illustrated above, salt water intrusion in arable grounds and in freshwater supplies has damaged subsistence food production and caused water stresses. Clearly, the impossibility to access to these basic needs (food, water, health) will affect the survival of Tuvaluans compromising their right to life. Climate change effects may also infringe the right to private and family life and the right to property. According to recent estimates the level of homeless people is 3.8 times higher in Tuvalu than in other developing countries⁸⁰.

Some scholars have proposed the use of Human Rights Law as an efficient legal framework to address the protection needs of Tuvaluans⁸¹. It has been suggested that once the violation of one of these fundamental rights have been established, states responsible of global warming should be hold accountable for these breaches and, as a consequence, should ensure protection and assistance to the islanders⁸². However, this argument can be opened to several criticisms. First, not all the human rights instruments imposing binding obligations on the parties provide a mechanism to receive complaints

⁷⁹ Although the Bill of Human Rights does not refer to the right to a healthy environment, such right could be derived from the Preamble of the 1972 Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration) which states: "Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights-even the right to life itself". See Declaration of the United Nations Conference on the Human Environment, adopted on 16 June 1972, UN. DOC A/CONF 48/14, available at <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503> (consulted on 10 April 2011); on the argument see Atapattu, 2002, p. 67.

⁸⁰ See United Nations Conference on Trade and Development (UNCTAD), cfr. supra footnote 76, p. 3.

⁸¹ See Duong, 2010.

⁸² Ibidem, p. 1260.

in case of violation⁸³. For example the International Covenant on Economic, Social and Cultural Rights (ICESCR), that could potentially ensure protection to climate change victims⁸⁴, does not have a Treaty Body that gives individuals the right to seek redress in case a state party breaches the obligation to which it is bound⁸⁵. Although in 2008 the General Assembly adopted an Optional Protocol to ICESCR establishing an inquire procedure and a complaint mechanism, the Protocol is not yet entered into force. Second, the vindication of human rights violation requires the identification of a specific actor as the cause of the injury⁸⁶. Since global warming is a result of joint liability it could be difficult to identify a specific responsible. Even if each country is responsible to some degree for polluting the atmosphere, one may say that it is difficult to determine how much pollution from each state causes the particular threats suffered by Tuvaluans⁸⁷. Third, in case of violation, the human rights machinery requires the establishment of a link between the harm suffered and the causation⁸⁸. Thus, victims of climate change like Tuvaluans should prove that the infringement of their basic rights is directly associated to climate change impacts. The establishment of this link might be problematic since the major emitters of GHGs could deny their responsibility by claiming that there is scientific uncertainty regarding the harms posed by climate change⁸⁹. Therefore, even though Tuvaluan's fundamental rights are under threat, the islanders will need to undertake more effective initiatives to face the challenges posed by climate change.

⁸³ On the argument see Moberg, 2010, p. 1116.

⁸⁴ The ICESCR contains human rights provisions that are relevant for the protection of climate change victims: right to an adequate standard of living (art 11.1), freedom from hunger (art. 11.2), right to health (art, 12).

⁸⁵ See International Service for Human Rights (ISHR), Simple Guide to UN Treaty Bodies, July 2010 available at <http://www.ishr.ch/guides-to-the-un-system/simple-guide-to-treaty-bodies> (consulted on 5 May 2011).

⁸⁶ See Moberg, 2009, p. 1117.

⁸⁷ See Duong, 2010, p. 1245.

⁸⁸ See Atapattu, 2002, pp. 98-99. Some lawsuits demonstrate that establishing a direct correlation between climate change and human rights violations could be troubling. For example, in 2005 the Inuit community started a legal action against the United States, alleging that the country's emissions were harming Inuit's environment and their fundamental rights. The Inter-American Commission of Human Rights rejected the Inuit's petition by claiming the insufficient evidence of harms. On the argument see Gordon, 2007, p. 55; Koivurova, 2007, pp. 286-290.

⁸⁹ Hay, 2008, p. 504; see also Jacobs, 2005, p. 110. The link between anthropogenic emissions and global warming established by the Intergovernmental Panel on Climate Change has been contested by many scientists. Indeed part of the scientific community claims that the growing level of carbon dioxide in the atmosphere does not cause temperature changes.

3.2 Responses of Tuvaluans to climate change

Tuvalu has reacted to the adverse impact of climate change through two main strategies: a) the deployment of adaptation measures in order to reduce the vulnerability of the country; b) efforts to reach an international visibility in order to call for the mitigation of greenhouse gases emissions.

a) *Adaptation measures*

Although Tuvalu has not sufficient funds to afford the high costs of adaptation projects, the country have implemented strategies (in part financed by foreign donors)⁹⁰ to address the urgent need of the islanders to adapt to climate change consequences.

The deployment of adaptation measures started in 1999, after Tuvalu declared its state of emergency. That year the country experienced drought and food shortages as a consequence of El Niño (which increased intensity is due to the warmer temperature of the ocean resulting from climate change)⁹¹. Since the groundwater -that used to be a natural freshwater store during droughts and the main source of water for agriculture- had been contaminated by the intrusion of saltwater due to sea level rise, the government had to respond immediately to the crisis. As a consequence, desalinisation technologies were implemented to address public water demand⁹². Over the years the government in association with local NGOs has adopted various adaptation measures to contrast climate change effects: development of communities disaster plans, construction of sea walls, introduction of community water tanks, plantation of mangroves and other local species to control coastal erosion⁹³. Furthermore national campaigns have been promoted to raise public awareness of climate change impacts on

⁹⁰ The main donors financing and implementing adaptation projects in Tuvalu are: Australia (Aus AID) and New Zealand (NZ AID) that allocated funds to finance water supply mitigation projects and the development of disaster plans; FAO and EU (European Development Fund- EDF) that financed erosion control projects and technical assistance for sustainable agriculture; the government of Taiwan that gave funds for the reconstruction of infrastructures. See South Pacific Applied Geoscience Commission (SOPAC), *Building capacity to ensure against disaster in Tuvalu*, Technical Report n. 380, June 2005, p. 24, available at <http://www.sopac.int/data/virlib/TR/TR0380.pdf> (consulted on 12 May 2011).

⁹¹ See Trenbert & Hoan, 1997.

⁹² See South Pacific Applied Geoscience Commission (SOPAC), cfr. supra footnote 90, p. 27.

⁹³ See Corlett, 2008, p. 39; Ministry of Natural Resources, cfr. Supra footnote 16, p. 35.

Tuvalu. These campaigns have been aimed at encouraging sustainable use of natural resources and reducing water waste⁹⁴.

In 2004 Tuvalu has launched its National Adaptation Programme of Action (NAPA) based on the participation of local community and sustainable development. This national project was financed by the Global Environmental Facility (GEF)⁹⁵ through its Least Developed Countries Fund (LDCF)⁹⁶. Its main tasks are: increasing resilience of coastal areas; increasing subsistence agricultural production through the introduction of salt-tolerant species; implementation of water conservation techniques to face the frequent water shortages; protection of coral reefs and marine ecosystem⁹⁷. Since 2008 Tuvalu has participated also to a large Pacific regional adaptation project (PACC)⁹⁸ which has been developed to enhance national adaptive capacity mainly in the fields of food security, water supply and coastal management.

Although both NAPA and PACC are concrete adaptation strategies whose implementation could ameliorate islanders living conditions, the Government of Tuvalu has found it difficult to access to the financial resources (GEF funds) allocated for these two projects. Indeed, while vulnerable countries require the expeditious disbursement of funding, the access to adaptation resources is subjected to bureaucratic processes, including the submission of project proposals by consultants. This conditions imposed by the GEF represent a substantial obstacle for developing countries like Tuvalu since they cannot afford the high costs required by consultants, with a consequent delay for projects implementation⁹⁹. Problems related to the access to adaptation resources concern also environmental funds allocated by single country donors. Even in this case

⁹⁴South Pacific Applied Geoscience Commission (SOPAC), *National Integrated Water Resource Management. Diagnostic Report for Tuvalu*, November 2007 available at http://www.pacificwater.org/userfiles/file/GEF%20IWRM%20Final%20Docs/SOPAC%20Diagnostic%20Report%20Tuvalu%2022_10_07.pdf (consulted on 12 May 2011).

⁹⁵ The GEF is the main financial instrument of the UNFCCC.

⁹⁶ See Barnett & Campbell, 2010, p. 98.

⁹⁷ See Tuvalu Ministry of Natural Resources, Environment, Agriculture and Lands, cfr. supra footnote 78, p. 7.

⁹⁸ On the PACC see Barnett & Campbell, 2010, p. 99.

⁹⁹ Secretariat of the Pacific regional Environment Programme (SPREP), *Poznan Climate Conference*, 2009 available at http://www.sprep.org/documents/highlights/poznan/poznanhighlights_low-res.pdf (consulted on 10 May 2011).

most of the money is spent for research and policy making rather than concrete community-based programs¹⁰⁰.

b) *Mitigation efforts proposed by Tuvalu*

Mitigation of greenhouse gas emissions is the second main strategy to fight climate change. However, the South Pacific region of which Tuvalu is part is responsible for only the 0.06 percent of global pollution¹⁰¹. Thus, even if the small island country makes efforts to reduce its own emissions it will contribute very little to alleviate the phenomenon of global warming¹⁰². Nevertheless Tuvalu has tried to influence climate change policy by participating to climate change negotiations, gaining international visibility and attempting to sue the major GHGs producers.

The first step undertaken by Tuvalu in order to influence the global mitigation process was its ratification of the UNFCCC in 1994 and the Kyoto Protocol in 1998. As shown in Chapter 2, the UNFCCC is considered the leading legal framework for the development of concrete responses aimed at preventing and mitigating the phenomenon of global warming. Furthermore it gives full consideration to small island countries by stating that all the signatory Parties should implement adequate response measures to address the needs of these vulnerable states affected by global warming¹⁰³. However, despite these commitments, the climate change regime has failed to reach the goal of substantial reduction of GHGs. Indeed the Convention does not provide binding obligations for developed countries which are required to decrease their anthropogenic emissions of GHGs to the levels that existed in 1990¹⁰⁴. This first target of reduction was recognised as inadequate and thanks also to the pressure exercised by small island countries (including Tuvalu) the third conference of the parties to the UNFCCC adopted

¹⁰⁰ See McLellan, 2009, p. 10.

¹⁰¹ Corlett, 2008, p. 40.

¹⁰² Although mitigation efforts undertaken by Tuvalu will not make any meaningful difference in relation to the decreasing of global temperature, the small island nation has adopted measures to reduce its GHGs emissions. See Government of Tuvalu, *Tuvalu Initial National Communication Under the United Nations Framework Convention on Climate Change, October, 1999* available at <http://unfccc.int/resource/docs/natc/tuvnc1.pdf> (consulted on 12 April 2011).

¹⁰³ United Nations Framework Convention on Climate Change (UNFCCC), adopted 29 May 1992, entered into force 21 March 1994, UN. Doc. FCCC/INFORMAL/84, art. 4.8, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf> (consulted on 4 April 2011).

¹⁰⁴ *Ibidem*, art 4.2 (a).

the Kyoto Protocol in 1997. Although the Kyoto Protocol sets binding obligations for industrialised countries, it establishes reduction targets that are still too low; it states that the parties shall limit their overall emissions by at least 5 per cent below 1990 levels in the period between 2008 and 2012¹⁰⁵, while recent studies have claimed that in order to slow the rate of climate change it would be necessary to cut at least the 60 percent of emissions¹⁰⁶. The small reductions achieved (with enormous difficulties) by developed countries will not alleviate the plight of Tuvalu. If the international community continues to delay substantial cuts, the threats already posed by climate change to the well-being of the small archipelago will be exacerbated and the future survival of the island compromised irremediably. Despite the political unwillingness of the developed world to recognise and address the adverse impact of climate change, Tuvalu (in association with other small island countries) has continued to express its concerns for the vulnerability of the South Pacific region and call for urgent responses from all major emitters. The Alliance of Small Island States (AOSIS) of which Tuvalu is member, had a key role in demanding meaningful reductions of GHGs and bringing the plight of climate change to the attention of the international community. AOSIS, a coalition of 42 low-lying countries, was formed in 1990 at the Second World Climate conference when Tuvalu's prime minister Bikenibeu Paeniu highlighted the extreme vulnerability of small island states and expressed its concerns for the survival of its nation¹⁰⁷. It was the AOSIS that originally proposed the idea of a binding Protocol to the UNFCCC since the climate change regime had not created enough incentives for polluters countries to decrease their emissions. However, as explained above, the Kyoto Protocol did not meet the expectations of AOSIS members that had proposed a reduction amounting to the 20 percent below the 1990 levels¹⁰⁸. Nevertheless, these failures have not stopped the coalition to persist in lobbying major emitters during

¹⁰⁵Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted 11 December 1997, entered into force 16 February 2005, UN Doc FCCC/CP/1997/7/Add.1, art. 3.1, available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf> (consulted on 2 April 2011).

¹⁰⁶ On the argument see Gillespie, 2004, p. 117; Barnett & Campbell, 2010, p. 90.

¹⁰⁷ On the argument see Oberthur & Ott, 1999, p. 26; see also Barnett & Campbell, 2010, p. 101.

¹⁰⁸ On the argument see Gillespie, 2004, p. 120. See also Alliance of Small island States (AOSIS), Draft Protocol to the United Nations Framework Convention on Climate Change on Greenhouse Gas Emissions Reduction, A/AC.237/L.23, 27 September 1994 available at <http://unfccc.int/resource/docs/a/123.pdf> (consulted on 3 May 2011).

climate change negotiations. In 2009 in occasion of the 15th Conference of the parties to the UNFCCC held in Copenhagen, the Alliance of island states continued to raise awareness of the acute consequences of climate change on small island nations and proposed to limit the increase of global temperature below 1,5 °C above pre-industrial levels¹⁰⁹. This goal could have been achieved through the adoption of a separate Copenhagen Protocol establishing to cut the 45 percent of emissions by 2020. Despite the support of numerous NGOs and Least Developed countries, the proposal was strongly opposed by BASIC countries (China, India, South Africa and Brazil), OPEC countries and the majority of developed states. The outcome of the Copenhagen conference was a failure from the perspective of island vulnerable states. Indeed the document adopted (“Copenhagen Accord”)¹¹⁰ does not represent a valid successor to the Kyoto Protocol (expiring in 2012). Although it recognises that the increase of global temperature should be reduced below 2°C, it does not provide legally binding obligations for the parties nor any concrete target to reach substantial long term reductions of GHGs¹¹¹.

Participation at climate change negotiations is not the only way pursued by Tuvalu to induce the major polluter countries to curb their emissions. In order to support the cause of developing island countries threaten by climate change, Tuvalu attempted to sue industrialised states that refused to sign the Kyoto Protocol¹¹². In 2002 the Prime Minister declared Tuvalu’s intentions to undertake a legal action against leading greenhouse gas emitters (namely United States and Australia)¹¹³ on the grounds of breaches of general obligations under UNFCCC¹¹⁴. However, this attempt to bring the suit to the International Court of Justice failed for jurisdictional and legal standing reasons¹¹⁵. Tuvalu’s recourse to international legal proceedings could have been a

¹⁰⁹ See Dunkiel, 2010.

¹¹⁰ Copenhagen Accord, adopted by the Conference of the Parties to the UNFCCC, Fifteen Session (COP-15), 18 December 2009, UN Doc. FCCC/CP/2009/L.7, available at <http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf> (consulted on 2 April 2011).

¹¹¹ See Wynn, 2009.

¹¹² On the argument see Jacobs, 2005; Moore-Ede, 2003, p. 8

¹¹³ Yet, United States has not ratified the Kyoto Protocol. Australia ratified it only in 2007.

¹¹⁴ It has been argued that, by refusing to ratify the Kyoto Protocol, US and Australia have violated the general obligation to stabilise GHGs concentration to which they are committed under the UNFCCC. On the argument see Okamatstu, 2005.

¹¹⁵ Koivurova, 2007, p. 27-281.

symbolic step towards the fight against global warming and the establishment of international liability. It could have encouraged future legal actions by other states threaten by climate change.

Despite the numerous efforts made by Tuvalu to raise international concern about climate change issues and push industrialised countries to curb their production of GHGs, the low targets for emissions reduction established during climate change negotiations highlight the political unwillingness to prevent and limit the increase of global temperature. This lack of adequate mitigation responses will also undermine the effectiveness of adaptation strategies that have been achieved or that still have to be implemented. Indeed adaptation projects if not complemented by pledges to reduce emissions will be meaningless. Adaptation, generally regarded as a long term process that enable individuals to live in difficult environmental conditions, could become a short term solution to assist Tuvaluans for a limited period of time before the tragic end of their country. If climate change effects continue to threat the country, the islanders will be left no other option than to relocate in another territory. This forced displacement is likely to generate further problems: which countries will admit permanent climate refugees? The next session considers the reluctance of neighbouring states to assist and grant relocation to Tuvaluans seeking refuge from unbearable life conditions.

3.3 Responses of neighbouring countries to Tuvaluans

As illustrated before, Tuvalu's survival depends on other countries. Mitigation efforts rely on the will of the major producers of GHGs to reduce their emissions, while adaptation projects depend on foreign funds. However, as responses to address climate change disruption have been slow and inadequate so far, Tuvalu will probably become dependent on other countries also for the resettlement of its entire population forced to move from the sinking nation. Although Tuvalu continues its fight against climate

change and considers relocation as the last option¹¹⁶, it has started to discuss the possibility to relocate the whole community in neighbouring countries (namely Australia and New Zealand). The negative responses it received highlights the vicious circle enacted by wealthier states in relation to climate change issues. Indeed industrialised countries, as the principal actors responsible of global warming and consequently of environmental displacement, exacerbate a problem (climate induced migration) that then they refuse to address. The policies adopted by Australia and New Zealand are just an example of inefficient strategies put in act by the vast majority of wealthier states towards future climate refugees.

Since 1990s Australia and New Zealand as members of the Pacific Forum had the opportunity to discuss important themes such as climate change with the leaders of Pacific Island nations¹¹⁷. While vulnerable islands have expressed in several occasions their deep concerns for current changes in the Pacific climate and have called for adaptation support and mitigation measures¹¹⁸, Australia and New Zealand have implemented only the first goal. Indeed they prefer to finance adaptation projects (they are important donors for Pacific islands) rather than undertake significant commitments to decrease their emissions¹¹⁹.

Despite its small dimensions, new Zealand is the 12th largest polluter in terms of per capita emissions¹²⁰. Although the country is committed under the Kyoto Protocol to reduce its emissions back to 1990 levels, the latest national GHGs inventory shows that the total emissions are still 20% higher than 1990 levels¹²¹.

¹¹⁶ Maatia Toafa, prime Minister of Tuvalu declared: “I don't think resettlement is an idea, well it may be an option available to us, as leaders I think we need to meet these challenges and stay hard on them, meaning to do the right thing now be able to save the country”. See Coutts, 2010.

¹¹⁷ See Barnett & Campbell, 2010, p. 105.

¹¹⁸ See the contents of the Niue declaration on Climate Change. Pacific islands Forum secretariat (PIFS), *Forum Communiqué*, Thirty –Ninth Pacific Islands Forum, Alofi, Niue, 19-20 August 2008 available at <http://www.spc.int/sppu/images/stories/2008%20communiqué%20forum.pdf> (consulted on 10 May 2011).

¹¹⁹ See Barnett & Campbell, 2010, p. 107.

¹²⁰ Organisation for the Economic Cooperation and Development (OECD), *Economic Surveys: New Zealand*, 2009 available at <http://www.oecd.org/dataoecd/62/41/42564695.pdf> (consulted on 10 April 2011).

¹²¹ The National Inventory is an official annual report that measures New Zealand's compliance in meeting its obligations under the Kyoto protocol. Although the reduction of emissions have improved comparing to 2006 levels, the production of GHGs is still too high. See New Zealand Ministry for the Environment, *New Zealand's Green House Gas Inventory 1990-2009. Environmental Snapshot*, April

On the other hand, Australia, as the world's largest emitter of CO₂ on per capita basis, has exacerbated the feelings of small island nations inhabitants, mainly Tuvaluans, for its scarce commitment towards climate change mitigation. Indeed Australian environmental policy has been characterised for its tardiness in ratifying the Kyoto protocol and its reluctance in recognising the adverse impact of climate change in the Pacific region¹²². During the Howard government (1996-2007) the country has been accused to be more in line with US policy instead of addressing the urgent needs of Tuvaluans¹²³. Indeed during that period the climate change debate has been driven by a small group of corporations which claimed that a substantial reduction of emissions would have affected severely the economic growth¹²⁴. With the election of the Labour Party in 2007 Australia seemed willing to tackle the issue of climate change more seriously. The Prime Minister Kevin Rudd committed to sign the Kyoto Protocol and to implement sustainable energy technologies in order to reduce substantially GHGs emissions. He invested in climate change research¹²⁵ and promoted a Carbon Pollution Reduction Scheme to lower emissions to up to 25 percent below 2000 levels by 2020¹²⁶. However, this ambitious target in line with the Copenhagen outcomes seems to be part of the political rhetoric rather than a concrete goal. Although emissions decreased in 2009 due to the global economic crisis, they raised again in 2010, an alarming data that indicates how much Australian economic power strongly relies on energy produced by burning coal¹²⁷.

If the measures adopted by New Zealand and Australia governments to address the root causes of global warming have been insufficient, the responses to the prospect of

2011, available at <http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2011-snapshot/index.html> (consulted on 10 April 2011).

¹²² On the political control on the public debate and scientific research related to climate change see Hamilton, 2007, p. 13.

¹²³ See Corlett, 2008, p. 58.

¹²⁴ This powerful group known as "greenhouse mafia" includes the oil, coal, electricity, cement, aluminium industries. On the argument see Hamilton, 2007, p. 3.

¹²⁵ The Labour Party commissioned an independent study to the economist Ross Garnaut about the consequences of climate change on Australia's economy and the strategies that Australia could adopt to mitigate its emissions. See Garnaut, 2008.

¹²⁶ Australian Government. Department of Climate Change and Energy Efficiency, *Reducing Australia Emissions*, April 2011 available at <http://www.climatechange.gov.au/government/reduce.aspx> (consulted on 11 May 2011).

¹²⁷ Cubby, 2010; Fogarty, 2011.

potential climate refugees arriving from Tuvalu have been as much inadequate. Even if the media¹²⁸ and some scholars¹²⁹ have emphasised the difference between the two countries in addressing climate induced displacement, none of them have signed any agreement to admit Tuvaluans in case the island nation ceases to exist.

It has been claimed that (in 2001) when Tuvalu Prime Minister made a request to neighbouring countries to accept islanders forced to move from their homelands as climate refugees, New Zealand responded positively by allowing seventy-five Tuvaluans to relocate each year to the country¹³⁰. However, New Zealand has clarified that there is no explicit arrangement with any Pacific island country to accept displaced persons due to climate change¹³¹. This confusion arose after the adoption of the labour migration program called Pacific Access Category (PAC). According to the PAC New Zealand has established a quota system that allows a limited number of migrants from Pacific islands (including Tuvalu) to gain residency in the country. The Pac has been tailored to assist migrants workers, not migrants fleeing from environmental disasters¹³². Furthermore, even if the admittance quota of seventy-five islanders per year were formulated to address the problem of climate induced displacement from Tuvalu, it would not be sufficient to grant protection to the 11.000 Tuvaluans. Indeed, with this limited quota, it would take 140 years to relocate the entire population and probably Tuvalu has not so much time left before its end¹³³.

Tuvalu's several appeals to discuss a plan for the future relocation of its inhabitants in neighbouring countries has not received a more favourable response by Australia. During the Howard government Australia tried not only to deny the existence of the

¹²⁸ Kirby, 2001.

¹²⁹ Jacobs, 2005, p. 107; Horne, 2006, p. 19.

¹³⁰ Lopez, 2007, p. 372; Jacobs, 2005; Friends of the Earth, *A Citizens Guide to Climate refugees*, 2005, pp. 5-6, available at <http://www.foe.org.au/resources/publications/climate-justice/CitizensGuide.pdf/view> (consulted on 10 April 2011).

¹³¹ New Zealand Ministry of Foreign Affairs and Trade, *New Zealand's Immigration Relationship with Tuvalu*, August 2009 available at <http://www.mfat.govt.nz/Foreign-Relations/Pacific/NZ-Tuvalu-immigration.php> (consulted on 30 April 2011).

¹³² On the argument see Foundation for International Environmental Law and Development (FIELD), *Receding maritime zones, uninhabitable states and climate exiles . How international law must adapt to climate change*, May 2011, p. 8 available at http://www.field.org.uk/files/climate_exiles_dw.pdf (consulted on 9 April 2011); see also Renauld et al, 2007, p. 19; Patel, 2006, p. 736.; Corlett, 2008, pp. 24-25; Williams, p. 515, 2008.

¹³³ See Lopez, 2007, 372.

new category of climate refugees¹³⁴ but also to shift its refugee protection burdens towards other islands, including Tuvalu. Indeed Tuvalu was proposed to admit asylum seekers from third countries that Australia refused to assist¹³⁵. This request, justified by the government as a “burden sharing” solution, was part of a broader close border strategy known as “Pacific solution”. Introduced after the Tampa accident¹³⁶, the Pacific solution was based on the mandatory detention for all unauthorised migrants, including asylum seekers; it established their “refoulement” towards off-shore detention centres located in Pacific islands¹³⁷. This practice, in association with other containment strategies such as the interception of refugees in high waters and temporary protection visas for successful asylum claimants, was aimed at limiting the arrivals of refugees within Australia territory¹³⁸. Furthermore, during the UNHCR meeting in Geneva (December 2001) Australia’s Migration Minister at the time Philip Ruddock suggested a reform of the UN refugee regime in order to tighten the refugee definition and cut development foreign aid to source countries that refused to take back citizens who did not obtain asylum in destination states¹³⁹. In a political contest in which also the protection standards of traditional refugees were undermined, the Tuvalu proposal for the formulation of an “evacuation plan” for climate refugees clearly found no hearing. With the election of the Labour Party Australia’s approach towards refugees (including environmental displaced persons) seemed to change. The Rudd government suspended the Pacific solution -regarded as an inadmissible practice towards refugees- and showed its intentions to take more seriously the plight of Pacific Islands affected by climate change. Before the elections the Labour Party proposed a policy discussion paper on

¹³⁴ Dr. Barrie Pittock, a scientist working for CSIRO (Australia’s national science agency) declared that he was asked by Australian government to remove a chapter from the book he was writing since it contained a reference to the consequences of climate change on human mobility. On the argument see Hamilton, 2007, p. 13.

¹³⁵ In November 2001 Tuvalu rejected Australia’s proposal to join Nauru and Papua New Guinea in admitting asylum seekers.

¹³⁶ In August 2001 The Tampa, a Norwegian vessel, rescued asylum seekers from a sinking boat and attempted to bring them to Christmas Island. The Australian Prime Minister Howard shown his unwillingness to receive unauthorized migrants within the country by refusing to admit these asylum seekers.

¹³⁷ On the argument see Taylor, 2005.

¹³⁸ United States Committee for Refugees (USCR), *Sea Change: Australia's New Approach to Asylum Seekers*, 2002, available at <http://www.safecom.org.au/pdfs/australia.pdf> (consulted on 11 May 2011).

¹³⁹ *Ibidem*, p. 38.

climate change in the Pacific. The proposal was aimed at helping neighbouring islands to meet the challenges of climate change through adaptation measures, mitigation efforts, assistance for citizens compelled to move from low lying areas that could become inhabitable due to sea level rise. The “Pacific Climate Change Strategy”¹⁴⁰ provided not only a plan for internal relocation but also the establishment of an international coalition (a sort of burden-sharing scheme) in case of cross boundary migration. This paper recognised the urgent need to formulate an evacuation strategy for countries like Tuvalu that face the prospect of total inundation, for which intra-country relocation or repatriation of refugees are untenable solutions. However, despite these recommendations about the future stability of the Pacific region, the Rudd government preferred to allocate resources for adaptation projects instead of undertaking substantial commitments for the reduction of GHGs emissions or pressing for the international recognition of climate change refugees. At the Pacific Forum meeting in Cairns in 2009 Rudd promised Australia’s support to its neighbours in terms of adaptation funds (\$150 over three years) and internal resettlement assistance but avoided to say whether the country would accept climate refugees from the region¹⁴¹. The government is aware that if the current mitigation and adaptation strategies fail to minimise the impact of climate change, Australia will be a first asylum country for islanders in need of permanent resettlement. However, although these concerns, Australia is still reluctant to recognise within domestic law climate refugees fundamental rights¹⁴² or to call for international negotiations on the issue. The current Labour Party government under the Prime Minister Julia Gillard has not determined any progress to tackle the issue of climate induced displacement. On the contrary, many commentators have suggested that the recent migration policy designed by the Labour Party is similar to the tough border protection strategy adopted to manage the illegal flows of boat people during the

¹⁴⁰ See Sercombe & Albanese, 2007.

¹⁴¹ See Nicholson, 2009; McLellan, 2009, p. 8.

¹⁴² In 2009 the Refugee Review Tribunal-Australia rejected the appeal of “climate refugees” from Kiribati. The applicants claimed to be admitted as a particular social group forced to move as a consequence of serious environmental harms. The Tribunal took the decision not to grant the protection status to the applicants since the production of carbon emissions from Australia or other high emitting countries do not constitute persecution, a necessary requirement to obtain the refugee status. See Refugee Review Tribunal-Australia (RRTA). Case No. 0907346, [2009] RRTA 1168, (10 December 2009), par. 51-53, available at <http://www.unhcr.org/refworld/docid/4b8fdd952.html> (consulted on 22 June 2011).

conservative Howard's decade. Indeed the government has expressed its intention to stipulate bilateral agreements with third countries to build offshore processing centres¹⁴³. Recently the Immigration Minister Chris Bowen has proposed an agreement with Malaysia that reminds the Pacific Solution. According to the "Malaysia solution" 800 asylum seekers intercepted by Australian authorities in territorial waters will be sent to Malaysia for processing. As part of the deal Australia will resettle 4,000 Burmese "authentic" refugees who have been processed in Malaysia's detention centres¹⁴⁴. This agreement can be regarded as a trading process that does not take into account the protection needs of asylum seekers. Australia is seeking to demonstrate to its public opinion, filled with a growing anti-refugee sentiment, that the country will not open the flood gates to boat people and that a renewed policy of mandatory detention for unauthorised migrants will be an efficient deterrent for further arrivals. At the same time, by taking "genuine" refugees from Malaysia, Australia is trying to maintain a humanitarian face to avoid criticisms from human rights actors. Even if this containment strategy is not directly linked to climate refugees, it could have serious consequences for the future displacement of Tuvaluans. Indeed if the country becomes a fortress with impermeable borders, not only traditional refugees but also climate refugees will find it difficult to be admitted within Australian territory.

Due to its prominent position in the Pacific region, Australia should recognise its responsibility towards environmental displacement and formulate a strategy to meet Tuvaluans protection needs. A possible solution could be a responsibility-sharing scheme implemented at regional level instead of the current burden-shifting solution.

¹⁴³ See Kelly, 2011.

¹⁴⁴ See Amnesty International, *Malaysia refugee swap: trading in human lives*, 26 may 2011 available at <http://www.amnesty.org.au/news/comments/25763/> (consulted on 1 June 2011).

CHAPTER 4.

Burden sharing regime protecting climate refugees

Previous chapters have shown the adverse impact of climate change on human mobility, focusing on the little archipelago of Tuvalu threaten by sea level rise and extreme weather events. The example of Tuvalu highlights the urgent need of international interventions in order to address the growing phenomenon of climate change displacement. The present chapter will explore how the recognition of international responsibilities could be the ground for the implementation of a new burden sharing system protecting migrants forced to relocate permanently as a consequence of climate change.

4.1 Climate displacement and justice: an introduction

Climate change is a global phenomenon; decisions taken at national level -mainly decisions concerning economic growth and related emission schemes- have trans-boundary effects that can modify irremediably the life of people living in other countries. The consequences of climate change are distributed unequally. While wealthier states, which are the largest producers of GHGs will be affected to a lower degree since they have the resources for investing in adaptation measures, developing countries, which play a little part in polluting the atmosphere, will be hurt dramatically. Indeed developing states are more vulnerable to climate change for several reasons¹⁴⁵: they are located in regions prone to natural disasters; their economies (based on agriculture sector) depend on environmental integrity; they do not have sufficient funds to implement adaptation projects. It can be claimed that climate change exacerbates global inequalities: while people of the developed world enjoy a healthy environment and maintain the majority of the resources, people in the South of the world are forced to move as a consequence of environmental disruptions and related economic instability. This unbalanced situation raises questions of global environmental justice. Theories of global justice generally refer to the distribution of benefits such as wealth,

¹⁴⁵ Grubb, 1995, p. 467.

income, freedoms, rights, opportunities. If we consider environmental integrity as a “basic good” fundamental for the enjoyment of the other benefits, it will be possible to build a theory of justice based on the fair distribution of the right to a healthy environment. However, my focus will not be on the distribution of the benefits but on the sharing of the burdens produced by climate change. How costs and responsibilities should be distributed once the environment has been threatened by climate induced impacts? In referring to environmental justice, part of the literature has tried to investigate how to distribute responsibilities among the international community in terms of mitigation efforts in order to minimise current environmental crises and prevent future catastrophes¹⁴⁶. Instead of focusing on the fair allocation of emission quotas to avoid the increase of global temperature, I will analyse how to allocate costs and responsibilities in case mitigation efforts would not be sufficient to address the situation of people who are already suffering the effects of climate change, in particular people forced to move from countries whose ecosystem has been irremediably compromised. The environmental justice theory applied to climate refugees should be able to answer to some key questions: Who should bear the burdens of climate displacement? Which are the criteria to distribute fairly responsibilities and costs among the duty bearers? In order to establish which actors should be hold accountable for climate induced migration and how obligations for the protection of climate refugees should be shared, it is fundamental to illustrate the various responsibilities involved in the environmental justice argument applied to climate displacement.

4.2 States responsibilities

The distinction among various responsibilities (*outcome responsibility, remedial responsibility, intergenerational responsibility, moral responsibility*)¹⁴⁷ will help to

¹⁴⁶ See Singer, 2002, p. 39. In order to distribute emission quotas more equally the author proposes to combine the “polluter pays” principle with the equal per capita share” principle.

¹⁴⁷ This distinction among responsibilities is borrowed from Miller. See Miller, 2004. While the author distinguishes among various forms of responsibilities to show how nations can be hold collectively responsible, I will use this distinction to built an environmental justice theory applied to climate displacement.

identify state protection duties towards people compelled to flee from environmental plights.

a) *Outcome responsibility*

First, it has to be established who is the bearer of *outcome responsibilities*; in other words it is fundamental to establish a link between a particular outcome (climate change and related displacement) and the agent who caused such problems. As stressed before climate change is not a natural phenomenon. Thus, the agents that could be held accountable for increasing global temperature are all the “anthropogenic entities” that contribute to some degree to pollute the atmosphere. In referring to agents responsible for GHG emissions I will consider collective entities, namely states. Since each state contributes (even if to different extents) to the pollution of the atmosphere, it can be claimed that climate change calls for international outcome responsibilities. The choice of states as relevant units of analysis for allocating environmental responsibilities could be subjected to various criticisms. First, one may say that environmental liability does not lie on states but on individuals and corporations as principal polluters¹⁴⁸. Indeed while individuals (especially in wealthier countries) contribute to GHG emissions by driving cars, consuming products of industrialised farming and using electricity, corporations release a consistent amount of carbon dioxide in the atmosphere by burning fossil fuels. However, it is difficult to determine to which extent single individuals or specific companies contribute to the particular harms related to climate change. Therefore, the present work considers states as outcome responsible since it is possible to monitor and measure the total amount of emissions produced by each country. Furthermore, even considering individuals and corporations as relevant agents responsible for global warming it is still possible to hold states primary accountable for climate change. Indeed states -through national institutions and domestic law- should implement measures to induce companies to curb their emissions and encourage people to change their consumerist lifestyle. A second possible criticism deriving from the recognition of states as principal bearers of climate change burdens is related to the

¹⁴⁸ On the argument see Caney, 2005, pp. 754-755.

justification of collective responsibility¹⁴⁹. If we consider states not only as governments and institutions but also as communities of people, is it just to hold them collectively responsible even if not all the members contribute to the same degree to pollute the atmosphere? For example, if a minority of individuals of a wealthy state chooses to pursue a “sustainable lifestyle” in order to preserve the environment from threats, why should it be held accountable on the same grounds of the majority which continues to pollute the atmosphere? The minority of people could claim that since they are not outcome responsible for GHG emissions the attribution of liability to the state as a collective entity has no justification. An example borrowed from Miller will be helpful to answer to this latter objection¹⁵⁰. In order to justify collective responsibility the author gives the example of a firm that pollutes the environment by depositing chemical substances in a river. The employees are divided in two groups: the majority is in favour of such practice, while the minority suggests to use a more expensive technology to prevent the environmental harm. In this case the collective responsibility extends to both groups since even the dissenting minority participates to a common practice (working in the firm) and shares the benefits deriving from the job (income). Turning to the previous example, the minority who has chosen a sustainable lifestyle - even if not strictly outcome responsible- should be ready to share the costs of climate change consequences since it continues to benefit from a national economic growth based on the burning of fossil fuels.

b) *Remedial responsibility*

The outcome responsibility is connected to the *remedial responsibility*. Indeed, once it has been established which are the agents accountable for climate change (polluter states), they should compensate the victims who suffer the consequences of such harms. Thus, after the recognition of the principal actors responsible for climate change adverse impacts, the next step will be to determine how the international community can repair the damage it has produced. Although there is no international institution to enforce compensation mechanisms for the victims of climate change, part of the literature and

¹⁴⁹ Ibidem, p. 758.

¹⁵⁰ Miller, 2004, p. 256.

the international framework on climate change have suggested a possible principle of justice to distribute remedial responsibilities among the members of the international community. This criterion, known as the “polluter pays principle”, is based on “common but differentiated responsibilities”¹⁵¹ for states who caused the problem: each country should pay in proportion to the amount of pollution it has produced. Therefore, the largest emitters of greenhouse gases should bear the majority of the burdens deriving from climate change. The polluter pays principle has been applied to distribute remedial responsibilities among states in order to maintain global emissions within tolerable limits and transfer resources for adaptation projects. Developed countries have tried (even if with scarce results) to “compensate” countries dramatically affected by climate change by affording mitigation and adaptation costs. I will attempt to apply the polluter pays principle as a “remedial measure” also for victims of climate induced displacement. Indeed, in case mitigation and adaptation strategies will not be adequate to address an irreversible environmental crisis, states outcome responsible for climate change should bear remedial responsibilities towards people forced to move from their countries. In case of climate displacement, compensation would consist in providing protection to people seeking a permanent refuge where to rebuild their lives. According to the principle of “common but differentiated responsibility”, countries liable for the largest amount of emissions -which are also the best able to cope with the problem since they have the majority of economic resources- should share the major costs of “climate induced evacuation”. Thus, once they recognise their “remedial duties” they should resettle climate refugees or finance other countries that decide to receive these flows. In conclusion, states remedial duties are based on two conceptions of justice: corrective justice (understood as a state duty to repair the harm it has provoked) and distributive justice (understood as the fair distribution of responsibilities among members of the international community).

c) *Intergenerational responsibility*

¹⁵¹ The principle of common but differentiated responsibility is proclaimed in climate change legal instruments. See UNFCCC, cfr. supra footnote 103, art 3.1; Kyoto Protocol, cfr. supra footnote 105, art 10.

Remedial responsibility has an intergenerational dimension. Do states have the duty to compensate not only for current pollution but also for past emissions? The recognition of states *intergenerational remedial duties* requires to establish how far back in time it is possible to go to determine states inherited responsibilities. Since the release of carbon dioxide in the atmosphere began with the Industrial Revolution, it could be claimed that developed countries are responsible for the cumulative emissions of the past two centuries. However, the view according to which wealthier states are accountable for the actions of their ancestors can be subjected to various criticisms and requires to be justified. One of the reasons to reject historical debt as a basis for compensation is the difficulty in measuring the amount of emissions that each state has produced since the Industrial Revolution and, as a consequence, the difficulty in distributing reparation burdens for past pollution. A second objection is based on the fact that industrialised states have not been aware for a considerable period of time about the impact of fossil fuel consumption on global temperature¹⁵². Therefore, their excusably ignorance should prevent them from bearing additional remedial burdens. Although we partially recognise the validity of such criticisms, the responsibilities of developed countries for historical emissions cannot be denied. Regarding the last objection, past ignorance about the damaging effects of carbon emissions does not absolve states from responsibility for previous generations. Singer for example claims that developed states could reasonably be deemed liable at least since the 1990s¹⁵³. Indeed in 1990 the first report of the Intergovernmental Panel on Climate Change demonstrated on scientific basis the connection between climate change and human activities. However, although the author considers responsibilities of polluter countries for the recent past, he does not establish who should shoulder the burdens of climate change resulting from pre-1990 emissions¹⁵⁴. He simply suggests that poor nations affected by climate change consequences “generously overlook the past”¹⁵⁵. On the contrary countries threatened by climate change should not forget the past; emitter states should bear compensatory burdens for climate change deriving from both current and

¹⁵² On the argument see Caney, 2005, p. 761.

¹⁵³ Singer, 2002, p. 34.

¹⁵⁴ On the objections to Singer’s theory see Caney, p. 762.

¹⁵⁵ Singer, 2002, p. 34.

historical pollution. Even if the quantification of past emissions is difficult to trace (first objection) and industrialised states were not aware of the harms they were causing (second objection), the duty to repair for actions of previous generations lies on grounds of corrective justice. Since developed countries (with present and past emissions) have created a condition of global inequalities in which vulnerable countries are the most affected by global warming, the latter ones should be compensated by the better-off in order to correct this unbalanced situation¹⁵⁶. Some scholars have criticised this lines of reasoning based on “corrective environmental justice” for past emissions. Caney for example claims that taking a collective approach according to which states should pay for the fault of their ancestors is not fair towards current members of industrialised countries who are not culpable for the pollution that took place in the past¹⁵⁷. Making them pay the costs of previous generation actions would recreate an unbalanced situation in which members of countries who emitted an excessive amount of GHGs in the past would have to bear more burdens than their contemporaries in other countries. Thus, according to Caney’s approach states historical responsibilities are not justifiable since they recreate inequalities that they were intentioned to eliminate¹⁵⁸. In response to this objection it is possible to use some arguments introduced before. As claimed above, collective entities (states) should be regarded as the relevant units for discussing climate change justice. States (mainly developed countries) that contributed to increase global temperature still exist and can be held accountable for the effects of their past policies. Generally the argument of states reparation duties is used to rectify wrongs committed in the past such as colonial exploitation or genocides. In case of reparation for historical events states that have inflicted the harms should bear the duty to “correct” the disadvantages created in the past through material compensation¹⁵⁹. In the context of

¹⁵⁶ On duties based on corrective justice see in general Opeskin, p. 26-27; see also Trujillo, 2007, pp. 23-24.

¹⁵⁷ Caney, 2005, pp. 761-762.

¹⁵⁸ Ibidem, p. 674-675.

¹⁵⁹ See Miller, 2004, p. 242. In order to reinforce the argument of collective national responsibility for past events the author gives the examples of Germans (accountable for the Holocaust) and Turkish (accountable for the Armenian genocide). Principles of corrective justice for historical events are also proclaimed in international legal instruments. As stated in the United Nations Declaration on the Establishment of a New International Economic Order (adopted 1 May 1974), the international community should respect “The right of all States, territories and people under foreign occupation, alien and colonial domination or apartheid to restitution or full compensation for the exploitation and depletion

climate displacement all the polluter states that since the Industrial Revolution have contributed to the present plight of environmental disruption (especially in poor countries) should bear extra costs and compensate the victims in terms of adequate assistance and protection. These claims of remedial justice call again for the distribution of burdens among developed states¹⁶⁰ which are also the most capable in dealing with climate refugees. Moreover, intergenerational responsibilities do not refer only to states' remedial duties for past actions but also to states' obligations towards future generations. Since many of the adverse consequences of global warming will be felt in the future affecting generations yet unborn, the international community has to implement measures to face the prospect of millions of people moving from climate induced catastrophes. States should recognise climate refugees as a legal category and establish a burden-sharing mechanism (based on global and regional cooperation) to ensure admittance and protection to present and future generations of climate refugees. As explained above climate change effects exacerbate global inequalities. The distribution of responsibilities among the international community would be a fair solution to address this unjust situation. This burden sharing strategy is based on principles of corrective justice: states which have caused the problem should fix it through compensation. In the context of environmental displacement the rectification of the wrongs would take the form of protection obligations. States will bear protection burdens (costs for assistance and resettlement of climate refugees) in proportion of their past and present contribution to global warming.

d) *Moral responsibility*

The distribution of duties towards climate refugees is based not only on principles of corrective justice (remedial duties) but also on solidarity principles (*moral*

of, and damages to the natural resources and all other resources of those states, territories and peoples" [Art. 4(f)]. See UN Doc. A/RES/3201 (S-VI), available at <http://daccess-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/071/94/IMG/NR007194.pdf?OpenElement> (consulted on 15 May 2011).

¹⁶⁰ The distribution of responsibilities among the international community based on the principle of "common but differentiated responsibilities" has to take into account that there are "historical differences in the contribution of developed and developing States to global environmental problems". On the argument see Centre for International Sustainable Development Law (CISDL), 'The Principle of Common but Differentiated Responsibilities. Draft Working Paper', p. 3, March 2005, available at http://www.cisdsl.org/pdf/sdl/SDL_Common_but_Diff.pdf (consulted on 6 June 2011).

responsibilities). According to this latter approach known as the humanitarian argument¹⁶¹ states share the moral duty to help people suffering or in a great distress¹⁶². Since climate refugees suffer serious harms as a consequence of environmental disruptions, they are entitled of protection on the basis of states moral obligations. In case of refugees forced to move from territories irremediably compromised by climate change impact this protection will take the form of admittance policies and resettlement plans. These obligations of humanity maintain their validity independently of the agents who caused the harms. So, even if states were not outcome responsible for climate change, they would still have the moral obligation to render aid to those people suffering the disadvantages of global warming consequences. This principle of humanitarianism irrespective of state boundaries is based on the idea that every human being, as member of a single human community, is entitled of basic rights and fundamental freedoms regardless of his nationality. As a consequence, states have the moral duty to protect not only their own citizens but also forced migrants who need a new state of residence to benefit from basic amenities that they cannot enjoy anymore in their homelands. In response to this argument one may say that if a state decides to relieve from suffering all needy foreigners by allowing their entrance, national economic interests, cultural identity and social cohesion will be threatened. Regarding this objection it is instructive to examine Walzer's communitarian position on the application of the principle of mutual aid towards newcomers¹⁶³. The author claims that states have the right to exercise control on their borders since the admission of "non-members" risks to undermine the interests of members of receiving political communities (especially the distinctiveness of national culture). However, he recognises states obligation to help and provide a refuge for "the most exposed and endangered people"¹⁶⁴. Since every person should have a place to live where a secure life could be granted¹⁶⁵, admission should be morally imperative for needy strangers who lack the protection of a political community. Refugees -as "de facto stateless" (distinct from

¹⁶¹ On the "humanitarianism" argument applied to refugees protection see Gibney, 1999, pp. 177-178.

¹⁶² See Opeskin, 1999, p. 24; Trujilo, 2007, p. 98.

¹⁶³ See Walzer, 1981.

¹⁶⁴ Ibidem, p. 21

¹⁶⁵ Ibidem.

other categories of migrants)- can be regarded as a particular group of needy outsiders who make the most forceful claim for entrance¹⁶⁶. Thus, although Walzer's account of mutual aid discriminates among suffering victims (suggesting close border policies for economic migrants), it constitutes a moral ground for refugees protection. Even if the author refers mainly to traditional refugees forced to move from political persecution, climate forced migrants can be included in the category of people "who make the most forceful claim of admittance" since they risk to lose not only their fundamental rights but also the territory where these rights can be enjoyed. Even a communitarian approach concerned about the preservation of close bounded political communities recognises the importance of moral obligations towards refugees admission.

In conclusion, industrialised countries have the moral duty not only to admit forced migrants but also to help first asylum countries which risk to be overwhelmed by present and future refugee flows. As things stand the burdens of refugee protection are unequally distributed: developing states host the large majority of forced migrants, while developed countries adopt containment measures to limit the number of refugees within their borders and shift their responsibilities towards other countries. This lack of equilibrium in protecting refugees (including climate refugees) should be addressed through an international cooperation. Coordination among countries to address climate displacement and the criteria to allocate fairly protection quotas will be discussed in details in the next section.

4.3 A burden-sharing approach to climate refugee protection

After having determined that costs and responsibilities for the protection of climate refugees should be shared by the international community, it is now time to illustrate which concrete policies have to be implemented to address the plight of climate displacement.

As clarified in Chapter 2 climate displacement highlights a gap in International Law. Indeed there is no binding treaty establishing states obligations to admit and protect climate forced migrants. Therefore, there is the urgent need to develop a new regime for

¹⁶⁶ Ibidem, p. 20.

the recognition, admission and resettlement of people seeking “permanent asylum” as a consequence of environmental degradation of their homelands.

The implementation of a legal framework for protecting climate refugees has stimulated a lively academic debate¹⁶⁷. As discussed above the amendment of the 1951 Geneva Convention is not a desirable solution. Some scholars have suggested the negotiation of a Protocol to the existing environmental legal instruments, while others favour the creation of an independent treaty. Biermann and Boas for example propose the creation of a “Climate Refugee Protocol” to the UNFCCC¹⁶⁸. This proposal is based on a set of core principles such as planned relocation and permanent resettlement, protection for collectives of people, international sharing of common but differentiated responsibilities. However, although these principles could address efficiently the protection needs of climate refugees, a Protocol to UNFCCC will not be the most desirable solution. Indeed the architecture of the current climate change regime is based on prevention rather than on remedial measures, on state to state relations rather than on victim rights. Furthermore, the international efforts to negotiate a post-Kyoto agreement providing guarantees for people who cross national borders as a result of climate change failed. Indeed, while the draft text of the new Protocol to the UNFCCC acknowledged that all the parties should implement adequate measures to address international migration and planned relocation of persons affected by climate change¹⁶⁹, the final text (Copenhagen Accord) omitted these references to climate displacement.

Other authors have proposed a more feasible solution: the establishment of an independent convention. Docherty and Giannini for example claim for a “stand-alone” treaty providing guarantees of assistance for climate refugees and distribution of shared

¹⁶⁷ For a discussion on the various proposals for a framework protecting climate refugees see Foundation for International Environmental Law and Development (FIELD), *Receding maritime zones, uninhabitable states and climate exiles. How international law must adapt to climate change*, May 2011, available at http://www.field.org.uk/files/climate_exiles_dw.pdf (consulted on 9 April 2011); Ganguly, 2011.

¹⁶⁸ Biermann & Boas, 2010, p. 76.

¹⁶⁹ See United Nations Framework Convention on Climate Change (UNFCCC), Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its Seventh Session, held in Bangkok from 28 September to 9 October 2009, and Barcelona from 2 to 6 November 2009, par. 12 (c), p. 38, UN doc FCCC/AWGLCA/2009/14, 20 November 2009 available at <http://unfccc.int/resource/docs/2009/awglca7/eng/14.pdf> (consulted on the 5 June 2011). The working Group refers to climate displacement as a form of adaptation strategy to environmental degradation. On the argument see also McAdam, 2010, p. 9; Bauer, 2010, p. 15.

responsibilities among home states, host states and the international community¹⁷⁰. Hodgkinson et al. propose a multilateral governance framework establishing rights and duties for both climate forced migrants and host states¹⁷¹. This latter proposal gives particular attention to small islands developing states by arguing that bilateral displacement agreements should be negotiated between islands that risk to disappear and receiving countries¹⁷². A further division in the academic debate regarding climate displacement is between the advocates of a global system protecting climate refugees¹⁷³ and authors who suggest the implementation of a regional protection mechanism. Williams for example proposes an agreement based on regional cooperation built on existing geopolitical and economic relationships¹⁷⁴. A regionally orientated program would avoid the lengthy process for the negotiation of an international treaty and would ensure a more efficient and prompt response to people forced to move from environmental disruptions.

Although these proposal differ as to the definition of people entitled of protection and the kind of instrument appropriate to address the issue of displacement, they all recognise the urgency of a coordinated response (at global or regional level) and the need to distribute fairly the costs and responsibilities of climate induced displacement. The principles of international cooperation and shared responsibility in relation to climate change impacts (including displacement) have been highlighted also by the OHCHR:

“Global warming can only be dealt with through cooperation by all members of the international community. Equally, international assistance is required to ensure sustainable development pathways in developing countries and enable them to adapt to now unavoidable climate change. International human rights law complements the United Nations Framework Convention on Climate Change by underlining that international

¹⁷⁰ Docherty & Giannini, 2009, pp. 373-384.

¹⁷¹ See Hodgkinson et al. 2008; Hodgkinson et. al 2009; see also Hodgkinson et al., 2010.

¹⁷² See Hodgkinson et al., 2009, pp. 41-43.

¹⁷³ See Biermann & Boas, 2010; Docherty & Giannini, 2009.

¹⁷⁴ Williams 2008, p. 518.

cooperation is not only expedient but also a human rights obligation and that its central objective is the realization of human rights”¹⁷⁵.

Burden sharing schemes put in act during the last half century in order to deal with the resettlement of (traditional) refugees prove that states cooperation in dealing with large scale inflows can be successful. Indeed, the resettlement of displaced persons (mainly victims of the Nazi regime and Russian political dissidents)¹⁷⁶ after the World War II and the CPA (Comprehensive Plan of action)¹⁷⁷ in the late '70 are concrete examples of efficient collective action aimed at distributing equally the burdens of refugee protection. Although these schemes of cooperation among states demonstrate that the sharing of responsibilities is not only an abstract obligation but also a concrete policy, they remain ad hoc solutions designed to bear the costs and responsibilities of specific refugee emergencies. Since climate displacement has been described as a large scale migratory movement that has no historical antecedent¹⁷⁸ and is likely to become endemic in many regions of the world, ad hoc solutions would not be adequate. It would be desirable to establish a multilateral governance regime to recognise the rights of people whose homelands will be rendered inhabitable by climate impacts¹⁷⁹. Furthermore, since global warming is likely to cause progressive environmental disruptions and the effects of climate change on humans can be predicted with a certain level of scientific evidence¹⁸⁰, climate displacement will not have the nature of a sudden

¹⁷⁵ Office of the United Nations High Commissioner for Human Rights (OHCHR), Report on the relationship between climate change and human rights, p. 26, par. 99, A/HRC/10/61, 15 January 2009 available at <http://www.ohchr.org/Documents/Press/AnalyticalStudy.pdf> (consulted on the 10 June 2011). Like the UNFCCC Report (cfr. supra footnote 169) the OHCHR report considers climate induced migration and consequent relocation as an adaptation strategy.

¹⁷⁶ In 1946 the United Nations created the IRO (International Refugee Organization) responsible for the resettlement of displaced persons who refused to be repatriated. This burden sharing system was based on a mechanism of resettlement quotas: a consistent number of countries (mainly western states) offered permanent resettlement to millions of people in need of protection.

¹⁷⁷ The CPA was a burden-sharing program implemented to resettle the victims of the War in Indochina. Vietnamese refugees were admitted in Western countries (mainly United States). The CPA was a cooperative framework aimed at alleviating the burdens of first asylum countries. However, this initiative was driven not only by humanitarian motivations but also by political interests. Indeed, the United States which had experienced a humiliating defeat during the Vietnam War established large admission quotas and put pressure on other countries to open their borders to people who refused to live under the new communist governments. On the argument see Shuck, 1997, pp. 255- 259.

¹⁷⁸ Bauer, 2010, p. 6.

¹⁷⁹ On the argument see Hodgkinson et al., 2009, p. 12.

¹⁸⁰ For example the effects of climate induced sea level rise on population of low-lying areas.

flight. Thus, since the future inhabitability of a territory is foreseeable, relocation due to climate change can be planned¹⁸¹. The establishment of regional agreements under the umbrella of an international regime would be the most adequate solution to manage adequately people movements¹⁸². Since each environmental crisis has its own characteristics and a different level of severity, regionally oriented programs would facilitate the development of specific strategies to tackle climate displacement¹⁸³. These resettlement programs based on regional cooperation will not exclude the responsibilities of the rest of the world. Indeed countries that do not contribute to refugees protection on their own territories will have to share the costs of the relocation.

4.4 Climate refugee regime

This work proposes the negotiation of an international legal instrument independent from the UNFCCC¹⁸⁴. This Convention will establish human rights guarantees for climate refugees and states' obligations towards this category of forced migrants.

First, it is important to establish which rights will be enforceable under the proposed Convention. The 1951 Geneva Convention could be regarded as a model to set up human rights guarantees for climate refugees since “it provides the most comprehensive codification of refugees rights yet established at international level”¹⁸⁵. Therefore, the new climate refugees regime will grant fundamental civil and political rights (such as right to property, freedom of association, free access to courts, freedom of movement, freedom of religion, freedom from discrimination) and economic, social and cultural rights (such as right to public education, social security rights, employment benefits). However, while the Refugee Convention establishes that the guarantees of certain rights

¹⁸¹ On the argument see McAdam, 2010, p. 1. Hodkinson et al, 2009, p. 23.

¹⁸² Williams, 2008, p. 520. The author proposes regional initiatives operating under the umbrella of a new post Kyoto International agreement.

¹⁸³ On the advantages of regional burden sharing programs see Hans & Suhrke, 1997, p. 105-108.

¹⁸⁴ As illustrated in Chapter 2 the climate change regime does not mention displacement among the consequences of climate change and does not establish states obligations towards individuals or groups of individuals.

¹⁸⁵ Docherty & Giannini, 2009, p. 376.

should be at least equal to those of other aliens¹⁸⁶, the new protection system should grant standards of treatment equivalent to those of nationals in the receiving country since climate refugees will not be simply “hosted”. Furthermore the Convention on climate refugees will include one of the core rules of the refugees regime, the principle of *non-refoulement*. In the context of the new instrument, this principle will prohibit receiving states from expelling or returning a refugee to the frontiers of states where his fundamental rights would be threatened by climate induced environmental disruption¹⁸⁷. In addition to the fundamental rights established in the 1951 Geneva Convention the climate refugees regime will provide “the right to seek and obtain permanent asylum” for collective groups compelled to move from environments irremediably compromised¹⁸⁸.

Regarding states obligations the climate refugee framework will be based on two levels of cooperation aimed at distributing fairly the burdens of climate displacement. The first level of burden sharing should be achieved on regional basis: countries of the same region will cooperate in order to admit and resettle people in need of “permanent asylum”. The second level requires a joint response by the international community: each state (mainly developed countries) should allocate financial resources in order to help host countries to sustain the costs of relocation and the basic needs of climate refugees.

This proposal needs some clarifications: which are the criteria to distribute “resettlement quotas” and “financial quotas” among countries? What kind of institutional organisation will ensure the feasibility of the climate refugee regime? In order to answer to this questions Shuck’s burden sharing model (mainly focused on the protection of “convention refugees”)¹⁸⁹ will be applied to the particular category of

¹⁸⁶ See 1951 Convention of Geneva Related to the Status of Refugees, art. 4, art. 13, art. 18, art. 19, art. 21.

¹⁸⁷ On the principle of non-refoulement applied to climate refugees see Hodgkinson, 2011, p. 14.

¹⁸⁸ The 1951 Convention of Geneva does not refer to the right to obtain asylum nor to states’ duty to concede asylum. Although the principle of non-refoulement has been interpreted as a state obligation to admit would be refugees within its territory, it cannot be regarded as a state obligation to ensure temporary protection or permanent resettlement. Indeed the prohibition to expel or return a person to territories where his life would be threatened does not secure rights deriving from the grant of asylum or permanent residence.

¹⁸⁹ Shuck, 1997; On burden sharing schemes applied to traditional refugees see also Suhrke, 1998; Hathaway, 1997.

climate refugees in need of permanent resettlement. Furthermore, institutional elements will be considered in order to tailor a detailed climate refugee framework.

Shuck recognises the lacunae of the current refugee regime, a framework that fails to afford adequate protection to the growing number of people forced to move from intolerable conditions. In discussing how to address the problem of massive refugee flows the author distinguishes between most desirable strategies (prevention or elimination of the root causes and safe repatriation of refugees) and less desirable strategies (temporary protection or permanent resettlement). In the case of refugees that move from environments irreparably compromised by climate change (for example people moving from island that risk to sink) the first three solutions cannot be taken into account. Thus, the only option considered in the climate refugees framework will be permanent resettlement. The structural organisation of Shuck's model will be briefly illustrated. His burden sharing regime consists in a regional agreement based on two core principles: a) the establishment of a set of criteria to distribute protection burdens among countries in the form of quotas; b) a market mechanism that allows participating states to trade their quotas.

a) According to the first element each state will be assigned a large or restrict number of refugees ("protection quotas") in proportion to its "burden-bearing capacity". This "protection capacity" is based on various criteria: national wealth, land mass, population density, human rights guarantees, assimilative capacity. The fundamental condition to ensure refugee protection is national wealth. Indeed developed states are the most capable to provide basic needs such as food, shelter, clothing, physical security to the newcomers.¹⁹⁰ Moreover, national wealth is an important criterion in a quota market system that allows a state to transfer its quotas by paying the transferee state. Land mass and population density are also important factors to determine the number of refugees that can be admitted¹⁹¹. The fourth criterion -the protection of human rights standards- permits to exclude some states from the burden sharing regime¹⁹². The rationale behind this principle is obvious: countries that do not respect fundamental freedoms and basic rights cannot be assigned protection quotas. The last criterion proposed by Shuck seems

¹⁹⁰ Schuk, 1997, p. 279.

¹⁹¹ Ibidem, p. 281.

¹⁹² Ibidem, p. 282.

less convincing. Indeed the assimilation criterion based on linguistic, ethnic and cultural ties between asylum seekers and the host community can lead to discriminatory processes of selection¹⁹³. Asylum seekers should not be selected on the basis of specific affinities in order to facilitate a more rapid assimilation. Assimilation should be considered a dated concept according to which states absorb the newcomers by requiring them to accept values, lifestyle, cultures and customs of the host community. States should recognise that the admission of migrants with different cultural backgrounds does not threaten the national social cohesion. Although the process of integration can be long and problematic, asylum seekers can enrich the destination countries by maintaining their own cultural distinctiveness and creating pluralistic societies in which cultural differences are regarded as an important value to be reinforced.

In the context of climate displacement some of these criteria (wealth, land mass, population, human rights guarantees) are fundamental to establish how to allocate “resettlement quotas” but they must be complemented by additional principles. As further criteria I suggest the principle of common but differentiated responsibility, the principle of proximity and the criterion of environmental wealth. According to the first criterion, resettlement quotas will be distributed also on the ground of national level of GHG emissions. Thus, industrialised countries which are the major responsible for past and present carbon emissions will be assigned the largest number of climate refugees in need of permanent protection. For example a country like Australia will be assigned a large number of resettlement quotas because of its high burden bearing capacity (it is a wealthy state not densely populated with available unoccupied land) and its leading role in polluting the atmosphere. The second principle –the criterion of proximity¹⁹⁴– justifies the choice of a system regionally oriented for the resettlement of climate refugees. The preference of neighbouring countries for the admission and protection of climate refugees is not motivated by the fact that countries of the same region may have

¹⁹³ Ibidem, p. 286-287.

¹⁹⁴ On this argument see Hodgkinson et al., 2009, p. 43.

similar cultural and social background¹⁹⁵. As argued before the presence or absence of cultural ties between source and destination countries is not a valid criterion to deny or accept refugees. The principle of proximity is fundamental not to worsen the traumatic consequences of displacement. Indeed the resettlement of climate refugees in the same region will render much easier their admittance as collective groups and will prevent them to be scattered around the world¹⁹⁶. The last criterion -environmental wealth- means that the territory where to resettle refugees should have healthy environmental conditions¹⁹⁷. This factor implies that even low density states with vast empty territories (ideal conditions to allocate resettlement quotas) will not be adequate to offer refuge to forced migrants in case their lands are threatened by natural or human induced environmental disruptions.

b) The second element of Shuck's proposal that I will try to adapt to a burden sharing scheme for protecting climate refugees is the "quota market". Rather than grant resettlement on its territory, each country would be allowed to transfer part or all of its resettlement quota obligations to another state by paying it. The payment could be considered as a compensation and would take the form of cash or any other resources (commodities, political advice, credit, development aid)¹⁹⁸. This latter component of Shuck's system is controversial and requires some clarification. Indeed a system of tradable quotas could generate a burden shifting mechanism instead of a burden sharing framework¹⁹⁹. Wealthier states reluctant to admit additional refugees may decide to delegate systematically their protection duties to developing countries. Even if Shuck's model is based on "consensus"²⁰⁰, which means that a state cannot impose its quotas to

¹⁹⁵ On this argument see Williams, 2008, p. 518. The author motivates the choice of a regional agreement for the protection of climate refugees on the ground that neighbouring states may offer cultural and social and conditions similar to the source country.

¹⁹⁶ See Germenne, 2006, p. 10.

¹⁹⁷ On the argument see Seglow, 2006 (a), p. 238. The author refers to the quality of "environment infrastructure" to establish admission quotas for the broad category of economic migrants. According to Seglow this fundamental principle for allocating quotas consists in low levels of pollution and limited human made environmental degradation.

¹⁹⁸ Shuck, 1997, p. 284.

¹⁹⁹ *Ibidem*, p. 285. The author argues that the transfer of responsibilities due to the quota market is not a form of burden shifting. Instead of undermining refugees protection, the market will increase it. In order to support his argument he claims that moving protection programs from wealthy states (where the costs per refugee are much higher) to developing states (where the costs per refugee are lower) would enable more refugees to be protected.

²⁰⁰ *Ibidem*, p. 283.

another, developed countries can exercise their political power to compel the transferee state to accept additional number of refugees in need of resettlement. Furthermore, developing states may be induced to accept resettlement quotas only because attracted by compensation, not for humanitarian reasons. Since Shuck's refugees regime does not provide any enforcement mechanism to ensure that the funds allocated by the transferor state would be spent for refugees relief, the quota market risks to undermine refugee protection standards²⁰¹. However, despite the limits of Shuck's quota market, the proposed climate refugees regime does not reject totally the quota trading system. In some cases this mechanism can work. It would be helpful to consider as example a possible bargain between Australia and New Zealand. According to the principle of "protection capacity" both countries will be assigned large resettlement quotas since they are wealthy, not densely populated and contribute (even if with a different degree) to the pollution of the atmosphere. New Zealand may decide to transfer part of its quotas to Australia, claiming that the latter has more empty territories to resettle refugees. In this case the trade can be considered fair since Australia's eventual decision to accept the resettlement quotas will be motivated by moral obligations towards refugees, not by the will to receive payments.

So far, it has been shown how to allocate fairly resettlement quotas at regional level. It is now time to illustrate the second level of burden sharing based on the distribution of the costs of climate displacement among the international community. Since each country is responsible to some extent for global warming, every state has to bear the financial costs of climate victims relocation as a form of remedial obligation for the harm suffered and as a moral duty towards people in need of assistance. Therefore, even countries that will not provide protection to climate forced migrants on their own territories should allocate economic resources to facilitate resettlement programs. Considering that the level of accountability of each country is proportionate to its level of past and present emissions, the costs should be divided according to an equitable

²⁰¹ Ibidem, p 294. The author claims that transferor state that pays other countries to fulfil its obligations have the responsibility to ensure that the rights of its quota refugees are fully protected. However, he does not explain how states that shift their duties towards other countries can enforce their responsibilities. Transferor countries unwilling to resettle forced migrants are unlikely to control if their "quota refugees" are adequately protected elsewhere.

mechanism of international burden sharing. The principle to distribute these “financial quotas” among states would be the polluter pays principle: each country responsible for pollution should pay a sum in proportion to its level of emissions. Therefore countries responsible of the largest amount of GHG emissions (whether historical or present) will have to pay the highest costs, while states which emit a smaller percentage of carbon dioxide will have to allocate a lower sum. Again the criterion of common but differentiated responsibility allows a fair distribution of burdens. Furthermore the distribution of financial burdens will have to take into account other factors like states ability to pay and their environmental conditions. For example developing countries or countries that face acute environmental crises (most of them are poor states) will be exonerated from bearing the costs of resettlement.

After having illustrated how to distribute fairly the resettlement quotas at regional level and the costs of displacement at international level it is necessary to establish which constituent bodies would ensure the workability and enforceability of the climate refugee regime.

First, the proposed Convention should provide a Global Coordinating Agency which main tasks would be to: establish the total number of people who need to be urgently relocated as a consequence of climate induced environmental disruption and the number of potential refugees who face the prospect of future displacement; allocate the resettlement quotas at regional level on the basis of the supra mentioned criteria. This Agency should work together with a Scientific Body²⁰² whose main aims will be to assess the increasing of global temperature; evaluate the current and future environmental harms due to climate change and the consequent impact on human mobility; determine the amount of carbon emissions produced by each country. These scientific data will help the Coordinating Agency to calculate the number of climate refugees and to distribute resettlement duties among states in proportion to their accountability.

²⁰² Some authors have proposed the establishment of a Scientific Body to ensure the workability of a climate refugees regime. See Docherty & Giannini, 2009, p. 389. The authors propose a body of Scientific Experts to determine the types of environmental disruption caused by climate change and ascertain the categories of people in need of protection; see also Hokinson, 2009, p. 27.

Regarding the distribution of financial assistance the climate refugee framework should create a Global Fund²⁰³ to which developed states parties to the Convention will make obligatory contributions. The Fund will determine the sum that each state have to pay annually and distribute the funds to both home states (in order to facilitate the evacuation) and to host states (in order to grant economic resources for the refugees resettlement). Furthermore the climate refugee regime will need an institution to monitor states compliance with their obligations. This Monitoring Body will take the form of an international agency with three main tasks: to ensure that refugees admitted in a receiving state enjoy human rights guarantees; to control that states fulfil their “resettlement quotas” and “financial quotas” obligations; to ensure the fairness of the quota market by preventing wealthier states from using their political power to shift their resettlement quotas toward developing countries. It has been suggested that an agency monitoring the workability of a burden sharing scheme should be constructed on the model of UNHCR²⁰⁴. However, it is doubtful that the UN Refugees Agency can carry the listed tasks. Indeed, even if UNHCR can call for states compliance with refugees rights under International Law, its recommendations have no binding effects. In order to determine the liability of states that do not respect their obligations under the climate refugees regime some authors have advanced the idea of an Appeal Committee. Hodgkinson et al. for example propose a Committee to hear appeals from destination states that do not receive financial assistance from countries responsible to transfer economic resources²⁰⁵. Such organ should provide also for the legal recourse (collective or individual) of climate refugees whose fundamental rights have been violated.

²⁰³ The idea of a global Fund for the management of climate displacement has been proposed by several authors. See Hodgkinson et al., 2009, pp. 28-29. According to their proposal the Climate Change Displacement Fund would establish states mandatory financial contributions in order to assist both internal relocation and inter-state migration; see Biermann & Boas, 2010. They propose a Climate Change Protection and Resettlement Fund linked to the UNFCCC to reimburse the costs of resettlement fully when climate change is the sole cause of resettlement, partially when it is only one of the causes; on the argument see also Docherty & Giannini, 2009, pp. 386-389.

²⁰⁴ Shuck, 1997 p. 278; Docherty & Giannini, 2009, p. 388.

²⁰⁵ Hodgkinson, 2009, p. 25.

4.5 Application of the climate refugee regime to Tuvaluans' displacement

After having described the various components of the climate refugees regime, the next step will be to illustrate how the proposed burden sharing scheme can be applied to a particular case study: the climate displacement from Tuvalu.

First, a regionally oriented agreement could be established between countries of the South Pacific region. States parties to the "Pacific Climate Change Alliance"²⁰⁶ will have to collaborate in order to ensure permanent resettlement to Tuvaluans and other possible refugees from low lying - islands in the region who face the prospect of climate displacement. Pre-existing regional associations like the Pacific Island Forum could constitute political arenas where to discuss the issue of climate change impacts on human mobility and the establishment of "resettlement agreements" between source and receiving states. The Pacific burden-sharing agreement will be based on the equal distribution of resettlement responsibilities in the form of quotas. Australia and New Zealand will receive the highest quotas on the grounds of their "protection capacity" and their role in polluting the atmosphere. Indeed they are both wealthy states, not densely populated, with empty lands. Furthermore their emission levels do not meet the mitigation standards required by the Kyoto Protocol. The leading role of Australia and New Zealand in receiving climate refugees does not mean that the other countries in the region will be excluded from resettlement responsibilities. For example the Fiji Islands could be a possible candidate to resettle part of Tuvalu population. Although the country is not wealthy, has a small land mass and contributes scarcely to the production of GHGs (all factors that exclude the assignment of high admission quotas), the Fiji islands may decide to join the Pacific coalition for solidarity reasons. Since the Fijian government has granted citizenship to Tuvaluans economic migrants who moved in the '60s, it may choose to admit Tuvaluans climate refugees for reasons of family reunification. All the countries involved in the resettlement program will be granted financial assistance by all the states parties to the international climate refugee regime. In particular developing states (for example Fiji) which accept part of resettlement burdens will need the prompt disbursement of economic resources by the Global Fund.

²⁰⁶ See Sercombe & Albanese, 2007, pp. 11-12.

In case one of the members of the climate refugee framework does not respect its obligation to allocate funds for climate displacement, states of the Pacific coalition will have the possibility to present a recourse to the Appeal Committee. The Pacific coalition may also decide to establish a regional quota market to trade the resettlement quotas among receiving countries. For example, Australia may decide to transfer part of its quotas to New Zealand and compensate the latter country to fulfil its obligation. This trading scheme will be controlled by an international monitoring body. This Global Agency will guarantee that powerful countries like Australia do not use their political influence or the attractiveness of high currency to compel weaker countries of the region to accept additional quotas of climate refugees.

This cooperation among Pacific states would allow a gradual relocation of Tuvaluans. Some of them might decide to remain in their home country until the relocation becomes imperative, while others will start to migrate in receiving countries to rebuilt a new life. This planned and progressive relocation will enable both the diaspora and the receiving community to adapt gradually to the new situation of coexistence. Furthermore, the allocation of climate refugees on the ground of fair quotas will limit severely states arbitrariness in deciding which number and which categories of migrants to admit.

4.6 Possible objections to the climate refugee regime

The regime tailored to protect climate refugees can be subjected to various criticisms. This section will try to answer to some possible objections.

a) Objections related to the regional orientation of the resettlement system

The first possible criticism is related to the regional orientation of the burden sharing scheme for the resettlement of climate refugees²⁰⁷. One may say that since climate

²⁰⁷ Possible objections to a refugees burden-sharing system regionally oriented have been highlighted by Hans & Suhrke, 1997, p. 106. Although the authors propose a regional burden-sharing regime, they suggest that such protection mechanism could be interpreted as a form of “apartheid” that prevents refugees from moving out of their region of origin.

change will affect only some areas of the world (mainly the poorest and vulnerable countries), the distribution of resettlement quotas on regional basis will create a situation similar to the one faced by traditional refugees: developed states will maintain their insulation from migration flows by shifting the responsibilities of admittance and relocation towards the South of the world. In order to answer to this objection it is necessary to clarify some aspects of the proposed framework. A burden sharing system regionally oriented does not mean that regions not affected by climate change will not have to bear resettlement burdens. Indeed the climate refugee regime will facilitate the establishment of burden sharing mechanism in every region of the world, even in wealthier areas like Europe and North America. Each state, even states which do not belong to regions facing environmental disruption, will be assigned resettlement quotas by the international Coordinating Agency according to the principle of common but differentiated responsibilities and respective “protective capacity”. Therefore, in case regions of the South were overwhelmed by climate migrants, regions of the North would have the obligation to admit part of these refugees. To sum up, a new climate refugee regime will provide “resettlement cooperation” not only between states of the same region but also between different regions.

A further objection to the regional orientation of the system is related to collective rights. One may say that the distribution of climate refugees fleeing from the same nation among different countries will put under threat their political community, common values and cultural identity. Some authors have proposed bilateral agreements between the source country and the destination state as a more adequate solution to resettle a population as a whole²⁰⁸. However this solution does not seem feasible for three main reasons. First, only a few states have the burden bearing capacity (wealth, low population density, empty territories, healthy environment) to relocate climate migrants as collective groups. Second, even for high quotas states (states that meet these requirements) the future proportion of climate change displacement will render impossible to relocate entire populations within their borders. Third, a bilateral agreement will limit the possibility of climate refugees to decide whether to be relocated as a group in the same country or on individual basis in different countries of the region.

²⁰⁸On the argument see McAdam (a), 2010.

The Tuvaluans' displacement constitutes a useful example to clarify these objections. In the South Pacific Region Australia represents an ideal candidate for admitting a population on a group basis since it is a wealthy state with available territories for relocation. It could resettle the 11.000 inhabitants of Tuvalu without creating an overcrowded situation within the country. However, although this solution will meet the urgent need of Tuvaluans to be relocated, it will not cover the possible future flows. Indeed Tuvaluans are only a fraction of all potential climate refugees that in the future might claim to be admitted in Australia as a whole population. Other countries affected by climate change, for example other low lying islands of the South Pacific (Kiribati, Marshall Islands) threatened by sea level rise, could advance the same request. A system based on bilateral agreements will work until the destination state -in our case Australia- does not have enough empty lands to grant permanent asylum to groups of climate refugees. In case Australia was not able to grant unused inhabitable lands to the various populations under threat, the country would need to cooperate with other states in the region to meet the requests of admittance. Therefore, it is preferable to establish a regional system rather than bilateral agreements in order to create a broader protection mechanism to address properly not only environmental crises that are already occurring but also possible future displacements due to climate change. A regional system will avoid a situation of competition among threaten populations that claim to be admitted in the same country as collective groups.

Furthermore, even if the majority of people forced to move from their home country will probably decide to migrate in the same area as a collective group, part of the population may decide to move on individual basis in different countries of the region. In the case of Tuvalu's displacement, the vast majority of islanders is likely to opt for Australia, while some Tuvaluans may prefer to be resettled in New Zealand or the Fiji to reach members of their families that have already moved there for economic reasons. By defending the distribution of responsibilities among different states we do not mean to build a system based on individual protection claims. As argued in Chapter 2 one of the main limits of the 1951 Geneva Convention is that it does not grant asylum to forced migrants who flee in group. On the contrary, the proposed climate refugee regime regards the resettlement of climate refugees as collective groups as a necessary

requirement and acknowledges the importance of collective rights like the preservation of cultural heritage. However, the aim of this work is to strike a balance between an ideal system and a system that is practically achievable. Although the relocation of a population as a whole would be the best solution, it will not be possible in most of the cases. Therefore, the relocation of smaller groups of climate refugees in different countries belonging to the same region should be regarded as a more achievable solution.

b) Objections related to the implementation of the climate refugees regime

The climate refugee regime can generate some sceptical observations about its concrete implementation. Since states (in particular developed countries) have demonstrated their reluctance in admitting traditional refugees within their borders, why should they recognise additional categories of forced migrants (climate refugees) and establish a regime that will be costly in terms of financial expenditure and social tension? This work has partially answered to this question by claiming that all the members of the international community have moral obligations towards climate refugees not only because they are responsible for GHG emissions (outcome responsibilities) but also because they have obligations of humanity towards needy people (solidarity duties). However, someone may say that moral aspirations are not a sufficient basis to motivate countries to set up a burden-sharing system since states need other forms of incentives (such as benefit-cost considerations) to accept refugee burdens. In response to this latter objection it can be claimed that a further reason to develop a collective scheme for the protection of forced migrants could be the insurance rationale²⁰⁹. A burden-sharing regime (on both regional and international basis) should be considered as a mutual “insurance scheme” protecting states from the pressure of mass inflows that can overwhelm their resources. States will accept a portion of refugee protection burdens (in the form of resettlement quotas and financial quotas) in order to “insure” themselves against the risk of being faced with large scale inflows in the future. This cooperative regime can be attractive not only for high risk receiving countries situated in regions

²⁰⁹ On the argument see Thielemann, 2006, p. 15.

more acutely affected by climate induced disruptions; it can also be beneficial for less vulnerable states (mainly developed countries in the North of the world) that are currently less threatened by global warming. Indeed climate displacement may become endemic in regions of the world that are not considered “traditional” source areas of climate migration. As highlighted in Chapter 2 recent studies estimate that if the global sea level continues to rise as a consequence of climate change, many coastal areas in the North of the world would be affected. As a consequence of flooding a relevant part of European population living in low-lying coastal territories might be forced to resettle in other countries of the region. Thus, a burden sharing mechanism could be beneficial also for regions like Europe in order to address properly possible future climate crises.

c) Objections to the quota market

Generally, market mechanisms applied to human beings raise various concerns. Indeed considering individuals or groups of individuals as objects of transactions cannot be justified from a moral perspective. A trading model applied to climate refugee protection can generate the same concerns. Shuck’s quota market has been already criticised by saying that wealthier states will not be allowed to use their political influence or their currency to convince poor and vulnerable countries to fulfil their resettlement obligations. In the proposed regime quota transactions will be allowed only among developed countries and the fairness of the market will be controlled by a Global Monitoring Body. Furthermore it has to be stressed that every transaction requires not only an agreement among the transferor and the transferee state but also the consent of the refugees involved. The establishment of regional coalitions to address the problem of climate displacement will create adequate fora where to discuss the needs of climate refugees and states receptive capacity. These regional fora will involve both representatives of possible receiving states and representatives of countries threatened by environmental factors. However, they should not be understood as seats for traditional diplomatic negotiations among states. Indeed they require the participation of both state and non-state actors (civil society). Governments of countries affected by climate change will have to prepare surveys for their population in order to identify where

individuals or groups of individuals prefer to be resettled. They will act in concert with local and international NGOs representing the interests of climate refugees in order to put pressure on states that intend to transfer their resettlement quotas without respecting the preferences of people in need to be relocated. Although refugees' choices should be given the priority over states interests, it might occur that refugees resettlement requests exceed the burden bearing capacity of the elected state. For example a large number of climate migrants may choose to resettle in a wealthy state with insufficient empty space. In this case the destination state will transfer part of its quota obligations to a second recipient state indicated by people forced to relocate.

In the context of South Pacific region the Pacific Islands Forum has been suggested as an appropriate political arena where to discuss climate displacement issues since it involves island nations under threat and wealthy states like Australia and New Zealand. In case New Zealand decides to transfer part of its resettlement quotas to Australia, it will have to justify the transaction (for example by demonstrating that Australia have more empty lands available) and respect refugees' choices (the trade will take place only if refugees agree to be resettled in Australia). In case climate migrants were transferred against their will, they could present legal recourse against the transferor state to the Appeal Committee.

d) Objections related to the maintenance of sovereignty and nationality

Disappearing states like Tuvalu raises questions about the maintenance of sovereignty and national belonging. If the notions of territory and permanent population are fundamental to define statehood²¹⁰, how can states whose population will be relocated and whose territory will be submerged by the ocean retain their sovereignty? If nationality is a *conditio sine qua non* to enjoy certain rights (namely political rights) how can climate refugees who become *de facto* stateless maintain such rights?

²¹⁰ The 1933 Montevideo Convention states that: "The state as a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with the other states" (Art. 1). See Montevideo Convention on Rights and Duties of States, adopted 26 December 1933, entered into force 26 December 1934. available at [http://www.cosmopolitikos.com/Documents/Montevideo%20\(1933\).pdf](http://www.cosmopolitikos.com/Documents/Montevideo%20(1933).pdf) (consulted on 3 May 2011).

Someone may say that the proposed regime has a substantial lacuna since it does not answer to these questions. Despite the relevance of these issues, a detailed discussion about the notion of statehood applied to disappearing states goes beyond the scope of this proposal. Nevertheless, some possible solutions to address the problem will be briefly illustrated.

One possible option for countries that are likely to become uninhabitable as a consequence of climate change is to buy territory from another state²¹¹. The settlers will exercise sovereignty rights on the new territory and will be granted the right to vote for their own government. Although the acquisition of a new land would be a desirable solution, it is untenable from a practical perspective. Indeed, as explained before there are not so many states with empty space available for communities' resettlement. Furthermore, even countries with a large amount of uninhabited useful lands may be reluctant to concede to the disappearing state full sovereignty on parts of their territories²¹².

An alternative (more plausible) solution for people forced to move from climate disruption would be the maintenance of sovereign control not over the ceded territory but over the abandoned country. As a possible option for disappearing states which desire to retain their sovereignty on their nation-state, Rayfuse proposes the reconceptualisation of the traditional notion of statehood based on territory. The author

²¹¹ On the argument see Rayfuse, 2009, p. 8. The author highlights one precedent for this solution: the Icelanders resettlement. During the 1870s thousands of Icelanders forced to move as a consequence of a volcanic eruption that devastated half of the territory were resettled in Canada. The Canadian government granted to the colony of New Iceland sovereignty rights on a vast piece of land. More recently some states threaten by climate change have tried to purchase lands in safer countries. For example the Maldives Islands are seeking to purchase territories in Australia, India and Indonesia. Kiribati is considering to buy lands in Australia. On the argument see McAdam, 2010 (b), p. 16.

²¹² The Australian proposal to resettle Nauru population is an example of states' reluctance to concede sovereignty over parts of their territories. In the 1960s, as a consequence of a human induced environmental disruption Nauruans were proposed to resettle permanently on Australian territory (Curtis Island). Australian government made clear that the granted land would have been subjected to Australian jurisdiction and Nauruans would have acquired Australian citizenship. The Nauru government rejected the resettlement offer on the basis that such proposal would have lead to the "assimilation" of Nauruans to the host community. Even if Australia's strategy could be regarded as a first attempt to ensure protection to people forced to relocate as a consequence of environmental degradation, the proposal was unsatisfactory from the perspective of "climate refugees". Indeed assimilation policies generates numerous concerns related to the maintenance of cultural and community identity of refugee groups. Furthermore Australia's "generous" offer to naturalise people from Nauru did not consider the possibility for migrants to retain a dual nationality. On the argument see McAdam, 2010 (b), p. 18.

suggests a further category of international personality: the “deterritorialised state”²¹³. The application of this concept in the context of sinking nations would allow climate displaced populations to retain sovereign control over maritime zones once the islands have been submerged. In the case of Tuvalu the recognition of its international personality as a deterritorialised state would allow the country to manage its maritime resources and sell fishing licenses to other countries. Furthermore, this new category of state requires a government or authority (elected by registers voters) that would continue to represent the deterritorialised state at international level and the interests of its citizens –whether resettled in one country or located in different states²¹⁴. Therefore, even if low-lying states like Tuvalu lose their territory, they will continue to maintain the other fundamental components of statehood: an independent government located in a host state, a permanent population resettled in different countries and the capacity to enter into relations with other states. Furthermore, climate refugees will not lose their nationality and, even in case they were naturalised in the host country they would maintain dual nationality. The acquisition of a new nationality and the maintenance of the previous one will allow climate displaced people to enjoy the benefits deriving from citizenship. As citizens of the deterritorialised state people forced to relocate would maintain the sentimental connection with their native land, their cultural and community identity. They would retain the right to vote for their representatives and economic rights related to the distribution of the resources of maritime zones. As citizens of the receiving state they would enjoy the same rights as nationals of the host community. The acquisition of the nationality of the destination state is fundamental to enjoy certain rights (such as voting rights, employment benefits and welfare entitlements) that are granted only to citizens. Indeed, although every human being is entitled of fundamental rights regardless of his national belonging, people who cannot avail themselves of the protection of their home states (de jure or de facto stateless) are excluded from the enjoyment of rights deriving from citizenship.

²¹³ Rayfuse, 2009, pp. 9-12. The most famous example of deterritorialised state is the Sovereign Order of the Knights of Malta. Although this order lost its territory when rejected from Malta by Napoleon, it has been recognised as a sovereign international subject with permanent observer status at the United Nations. On the argument see Odalen, 2011, p. 12; Yamamoto & Esteban, 2010, p. 6.

²¹⁴ Rayfuse, 2010, p. 11.

5. Conclusions

The extreme vulnerability of low lying island nations to the adverse impact of climate change has been widely covered by media, academic literature and scientific reports. Tuvalu has become an icon in the discourses surrounding the environmental and human implications of global warming. Frequently referred to as the new Atlantis, the small archipelago will be swallowed by the Ocean in the near future leaving its entire population no other choice but to relocate in other countries. Its inhabitants are already suffering the dramatic effects of sea level rise; coastal erosion, droughts, inundation, salinisation of the soil and consequent destruction of primary resources are threatening irreversibly the habitability of the country. Although Tuvaluans' plight needs to be addressed urgently, states have demonstrated their unwillingness to recognise the category of climate refugees and their reluctance to admit forced migrants in need of permanent resettlement. Climate refugee rights are not enforceable under any existing legal instruments and states have no legal obligations to grant "permanent asylum" to victims of environmental disruptions. International efforts aimed at addressing climate change issues are related to preventive strategies rather than remedial measures. The UNFCCC, the international framework that could potentially tackle the problem of climate displacement, does not refer to human mobility as one of the consequences of climate change; it does not establish financial compensation nor remedies (such as permanent resettlement) for people forced to leave their home places. It is focused on precautionary measures, in particular mitigation efforts to reduce greenhouse gases emissions and adaptation projects to minimise the impact of global warming on the environment. By stressing the protection gaps of the current legal system the present work does not intend to claim that preventive measures are useless responses to climate

displacement. The curbing of GHG emissions and the deployment of adaptation projects are fundamental measures to address the “root causes” of climate displacement. Indeed the stabilisation of emission levels and the consequent decrease of global temperature will prevent new environmental crises and further degradation of affected areas. Adaptation measures will enable individuals to live in difficult environmental conditions. However, the mitigation of global warming and adaptation projects are not sufficient solution for vulnerable countries like Tuvalu that have been irremediably compromised by climate change. According to the provisions of the Intergovernmental Panel on Climate Change even if emissions are reduced below 1990 levels by 2020, the sea level will continue to rise compelling inhabitants of low lying areas to move in safer territories. Therefore, preventive policies should be complemented by a new legal framework aimed at recognising the rights of climate refugees and states’ obligations towards this category of forced migrants. The proposed international climate refugee regime will be based on a burden-sharing mechanism aimed at distributing fairly the costs and responsibilities of climate displacement among members of the international community. Developed countries which play a primary role in polluting the atmosphere should acknowledge their responsibilities and provide assistance to people forced to move as a consequence of climate change. The allocation of financial and resettlement quotas among states on the basis of their accountability for past and present emissions and respective national “burden-bearing capacity” would be an adequate solution to avoid burden shifting mechanisms.

Although this work acknowledges that the establishment of an independent Convention will require a lengthy negotiation process and that states are generally reluctant to open their doors to additional categories of refugees, these difficulties are not valid reasons to consider a new climate refugee regime unrealistic. Considering the huge proportions of the phenomenon of climate displacement, wealthier states cannot continue to erect barriers in order to deny the entrance to people in need of protection; they should consider themselves as major recipient states since they have the resources (economic and institutional) to address the needs of climate migrants. In particular developed states situated in regions severely affected by climate change and more likely to receive climate refugees flows could make significant efforts to achieve a burden-sharing

protection system. Australia for example could be highly motivated to implement a cooperative mechanism protecting climate refugees not only by reasons of international solidarity but also by benefit-cost considerations. Indeed the cooperation with other countries at both regional and international level will prevent Australia from mass inflows from neighbouring states that could overwhelm its national resources. Given its leadership in the Pacific region and its influential position in international fora, Australia could take important steps to implement a climate refugee framework. First, the country could press the UN for the recognition of climate refugee rights and states obligations within a new international legal instrument. Secondly, Australia should implement a burden sharing system with other countries of the Pacific region to ensure adequate resettlement to people forced to move as a consequence of climate induced degradation. This “Pacific Alliance” would be a model for the achievement of other burden sharing systems regionally oriented.

Although this work focused on Tuvalu’s environmental plight and sought to propose a solution to address Tuvaluans’ displacement, its aim is not to prioritise the protection needs of climate refugees in the South Pacific region. On the contrary the international regime proposed requires the implementation of multiple burden sharing systems regionally oriented in order to deal with the global phenomenon of climate displacement that will force hundreds of millions of people to relocate permanently in every part of the world.

Bibliography

Books and articles

- Anker, Deborah, Fitzpatrick, Joan & Shacknove, Andrew, 'Crisis and Cure: A Reply to Hathaway/Neve and Schuck Responses', pp. 295-310 in *Harvard Human Rights Journal*, Vol. 11, 1998.

- Atapattu, Sumudu, 'Right to a Healthy Life or the Right to Die Polluted: The Emergence of a Human Right to a Healthy Environment under International Law', pp. 65-126 in *Tulane environmental law Journal*, Vol. 16, 2002.

- Barnett, Jon & Campbell John, *Climate Change and Small Island States. Power, Knowledge and the South Pacific*. London: Earthscan, 2010.

- Bates, Diane C., 'Environmental Refugees? Classifying Human Migrations Caused by Environmental Change', pp. 465-477 in *Population and Environment*, Vol. 23, No. 5, 2002.

- Bauer, Steffen, 'Climate Refugees beyond Copenhagen', March 2010, pp. 1-26, available at http://www.brot-fuer-die-welt.de/downloads/fachinformationen/analyse_12_englisch.pdf (consulted on 10 June 2011).

- Bell, Derek R., 'Environmental Refugees: What Rights? Which Duties?', pp. 135-152, in *Res Publica*, Vol. 10, 2004.

- Biermann, Frank & Boas, Ingrid 'Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees', pp. 60-88, in *Global Environmental Politics*, Vol. 10, No. 1, 2010.

- Caney, Simon, 'Cosmopolitan Justice, Responsibility, and Global Climate Change', pp. 747-775 in *Leiden Journal of International Law*, Vol. 18, 2005.

- Connell, John, 'Losing ground? Tuvalu, the greenhouse effect and the garbage can', pp. 89– 107 in *Asia Pacific Viewpoint*, Vol. 44, No. 2, 2003.

- Corlett, David, *Stormy Weather. The Challenge of Climate Change and Displacement*. Sidney: Black Inc., 2008.

- Cooper, Jessica B., 'Environmental Refugees: Meeting the Requirements of the Refugee Definition', pp. 480-530 in *New York University environmental Law Journal*, Vol. 6, 1998.

- Coutts, Geraldine, 'Tuvalu PM vows to continue climate fight', Interview with Maatia Toafa Prime Minister of Tuvalu, Radio Australia, 5 October 2010, available at <http://www.tuvaluislands.com/news/archives/2010/2010-10-05.html> (consulted on 4 May 2010).

- Cubby, Ben, 'Our greenhouse emissions back on the rise' in *Sydney Morning Herald*, 28 May 2010, available at <http://www.smh.com.au/environment/climate-change/our-greenhouse-emissions-back-on-the-rise-20100527-whtq.html> (consulted on 12 May 2011).

- Docherty, Bonnie & Giannini, Tyler, 'Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees', pp. 349-403, in *Harvard Law Review*, Vol. 33, 2009.

- Dunkiel, Brian, 'Pacific Small Islands in Copenhagen Climate Change Conference: An Advocate's Perspective', January 2010 available at <http://www.seventhgeneration.com/learn/blog/pacific-small-islands-copenhagen-climate-change-conference-advocates-perspective> (consulted on 13 May 2011).

- Duong, Tiffany T.V., 'When Islands Drown: The Plight of Climate Change Refugees and Recourse to International Human Rights Law' in *The University of Pennsylvania Journal of International Law*, pp. 1239-1266, Vol. 31, 2010.

- El-Hinnawi, Essam, *Environmental Refugees*. Nairobi: United Nations Environment Programme, 1985.

- Fogarty, David, 'Australia's greenhouse emissions rise 0.5 pct in 2010', in *Reuters* 18 April 2011, available at <http://www.reuters.com/article/2011/04/18/us-australia-carbon-factbox-idUSTRE73H25920110418> (consulted on 22 May 2011).

- Ganguly, Geetanjali 'Climate change, disappearing states and forced human displacement: the desirability and merits of a protocol or convention for persons displaced by climate change' (Paper presented at the ANU College of Law, Environmental Law Student Society Symposium, 28 May 2011) available at <http://law.anu.edu.au/coast/events/environment/papers/ganguly.pdf> (consulted on 5 June 2010).

- Garnaut, Ross, 'The Garnaut Climate Change Review', October 2008 available at <http://www.garnautreview.org.au/index.htm> (consulted on 10 April 2010).

- Germaine, François, 'Climate Change and Forced Displacements: Towards a Global Environmental Responsibility? The Case of the Small Island Developing States (SIDS) in the South Pacific Ocean', Paper presented at the 47th Annual Convention of the International Studies Association, San Diego, 22-25 March 2006 available at <http://www.cedem.ulg.ac.be/m/cdc/12.pdf> (consulted on 13 April 2011).

- Gibney, Matthew J., 'Liberal Democratic States and Responsibilities to Refugees', pp. 169-181, in *The American Political Science Review*, Vol. 93, n.1, 1999.

- Gillespie, Alexander, 'Small Island States in the face of Climate Change: The End of the Line in International Environmental Responsibility', pp. 107-129 in *Ucla journal of environmental Law and Policy*, Vol. 22, 2004.

- Goodwin-Gill, G.S., *The Refugee in International Law* (second edition). Oxford: Clarendon Press, 1996.

- Gordon, Jessica, 'Inter-American Commission on Human Rights to Hold Hearing after Rejecting Inuit Climate Change Petition' in *Sustainable Development Law & Policy*, Vol. 7, Issue 2, 2007.

- Grubb, Michael, 'Seeking Fair Weather: Ethics and the International Debate on Climate Change', pp. 463-469 in *International Affairs*, Vol. 71, Issue 3, 1995.

- Hamilton Clive, *Scorcher: the Dirty Politics of Climate Change*. Melbourne: Black Inc. Agenda, 2007.

- Hans, Asha & Surke, Astri, 'Responsibility sharing' in James C. Hathaway (ed.), *Reconceiving international refugee law*. The Hague, Boston and London: Martinus Nijhoff, 1997.

- Hathaway, James C., *The Law of Refugee Status*. Toronto: Butterworths, 1991.

- Hathaway, James C., *Reconceiving international refugee law*. The Hague, Boston and London: Martinus Nijhoff, 1997.

- Hay, Derald J., 'Post Kyoto Stress Disorder: How United States Can Influence Climate Change Policy', 493-529 in *Missouri Environmental Law and Policy Review*, pp. Vol. 15, 2008.

- Hodgkinson, David, Burton, Tess, Dawkin, Simon and Young, Lucy, 'Towards a Convention for Persons Displaced by Climate Change: key Issues and preliminary Responses', 2008 available at <http://www.ccdpconvention.com/documents/Research%20note%20-%20CCDP%20convention.pdf> (consulted on 7 May 2011).

- Hodgkinson, David, Burton Tess, Anderson Heather and Young Lucy, 'The Hour when the ship comes in: a Convention for Persons Displaced by Climate Change,' (2009) available at http://www.hodgkinsongroup.com/documents/Hour_When_Ship_Comes_In.pdf (consulted on 7 May 2011).

- Hodgkinson, David, Burton, Tess, Anderson, Heather and Young, Lucy, 'Copenhagen, Climate Change refugees and the need for a Global Agreement', 2010 available at http://www.ccdpconvention.com/documents/Copenhagen_And_CCDPs.pdf (consulted on 8 May 2011).

- Hong, Jeanhee, 'Refugees of the 21st Century: Environmental Injustice', pp. 323-348, in *Cornell Journal of Law and Public policy*, Vol. 10, 2001.

- Jacobs, Elisabeth R., 'Treading deep Waters: Substantive Law Issues in Tuvalu's Threat to Sue The United States in The International Court of Justice' in *Pacific Rim Law & Policy Journal*, Vol. 14, 2005.

- Kelly, Paul, 'Climate and Refugees Gillard's Hurdle', in *The Australian*, 28 May 2011 available at <http://www.theaustralian.com.au/national-affairs/commentary/climate-and-refugees-gillards-hurdle/story-e6frgd0x-1226064392942> (consulted on 1 May 2011).

- Kirby, Alex, 'Pacific islanders flee rising seas', BBC News, 9 October 2001, available at <http://news.bbc.co.uk/2/hi/science/nature/1581457.stm> (consulted on 15 May 2011).

- Koivurova, Timo, 'International Legal Avenues to Address the Plight of Victims of Climate Change: Problems and Prospects' pp. 267-300 in *Journal of Environmental Law and Litigation*, Vol. 22, 2007.

- Lopez, Aurelie, 'Protection of Environmentally-Displaced Persons in International Law', pp 365-410 in *Environmental Law*, Vol. 37, 2007.

- Keane, David, 'Environmental Causes and Consequences of Migration: A Search for the Meaning of Environmental Refugees', pp. 209–223, in *Georgetown International Environmental Law*, Vol. 16, 2004.

- Mason, Moya K., 'Tuvalu: Flooding, Global Warming, and Media Coverage', 30 November 2009 available at <http://www.moyak.com/papers/tuvalu-climate-change.html> (consulted on 30 April 2011).

- McAdam, Jane (a), 'Refusing Refuge in the Pacific: (De)Constructing Climate-Induced Displacement in International Law', University of New South Wales Faculty of Law Research Series, Paper 27, 2010 available at [http://law.bepress.com/cgi/viewcontent.cgi?article=1222&context=unswwps&sei-redir=1#search="McAdam+refusing+refuge+in+the+pacific"](http://law.bepress.com/cgi/viewcontent.cgi?article=1222&context=unswwps&sei-redir=1#search=) (consulted on 5 May 2011).

- McAdam, Jane (b), 'Disappearing States, Statelessness and the Boundaries of International Law', University of New South Wales Faculty of Law Research Series, Paper 2, 2010 available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1539766 (consulted on 6 May 2011).

- McAdam, Jane, 'Swimming Against the Tide: Why a Climate Change Displacement Treaty is Not the Answer' in *International Journal of Refugee Law*, Vol. 23, Issue 1, 2011.

- McLellan, Nic, 'Rising Tides: Responding to Climate Change in the Pacific', pp. 8-13 in *Social Alternatives*, , Vol. 28, n.4, 2009.

- Miller, David, 'Holding Nations Responsible' in *Ethics*, pp. 240-268, Vol. 114, 2004.

- Moberg, Kara, 'Extending Refugee Definition to Cover Environmentally Displaced Persons Displaces Necessary Protection', pp.1107-1136 in *Iowa Law Review*, Vol. 94, 2009.

- Moore-Ede, Piers, 'Come Hell or High Water. Rising sea levels and flooding threaten to make the South Pacific's Tuvalu the first victim of global warming' in *Alternatives Journal*, pp. 8-9, Vol. 29, Issue 1, 2003.

- Myers, Norman, 'Environmental Refugees: A Growing Phenomenon of the 21st Century', pp. 609-613, in *Philosophical Transactions Royal London*, Vol. 357, n. 1420, 2002.

- Myers, Norman & Kent, Jennifer, *Environmental Exodus. An Emergent Crisis in the Global Arena*. Washington, D.C.: Climate Institute, 1995.

- Nicholson, Brendan, 'PM won't be drawn on climate change refugees' in *The Sydney Morning Herald*, 6 August 2009 available at <http://www.smh.com.au/environment/climate-change/pm-wont-be-drawn-on-climate-change-refugees-20090805-ea33.html> (consulted on 25 May 2011).

- Oberthur, Sebastian & Hermann E. Ott, *The Kyoto Protocol*. Berlin: Springer, 1999.

- Ödalen, Jörgen, 'Disappearing States, Territory, and the Rights of Environmental Migrants', 2010 available at <http://student.statsvet.uu.se/modules/kurser/visadokument.aspx?id=12576> (consulted on 23 June 2011).

- Okamatsu, Akiko, 'Problems and Prospects of International Legal Disputes on Climate Change', Berlin Conference on the Human Rights Dimensions of Global Environmental Change, December 2005 available at <http://www.sprep.org/att/IRC/eCOPIES/Countries/Tuvalu/47.pdf> (consulted on 23 April 2011).

- Opeskin, Brian, 'The Moral Foundations of Foreign Aid' in *World Development*, pp. 21-44, Vol. 24, No. 1, 1996.

- Osofsky, Hari M., 'Learning from Environmental Justice: A New Model for International Environmental Rights', pp. 71-150 in *Stanford Environmental Law Journal*, Vol. 24, 2005.

- Patel, Samir S., 'Climate Science: A Sinking Feeling' pp. 734-736 in *Nature*, Vol. 440, n. 7085, 2006.

- Piguet, Etienne, 'Climate and Migration: a Synthesis', pp. 73-86 in Tamer Afifi & Jill Jäger, (eds.), *Environment, Forced Migration and Social Vulnerability*. Heidelberg, Dordrecht, London, New York: Springer, 2010.

- Rayfuse, Rosemary, 'W(h)ither Tuvalu? International Law and Disappearing States', University of New South Wales Faculty of Law Research Series, Paper 9,

2009, available at <http://www.austlii.edu.au/au/journals/UNSWLRS/2009/9.html> (consulted on 30 May 2011).

- Rayfuse, Rosmary, 'International Law and Disappearing States: Utilising Maritime Entitlements to Overcome the Statehood Dilemma' University of New South Wales Faculty of Law Research Series, 2010 available at <http://www.austlii.edu.au/au/journals/UNSWLRS/2010/52.html> (consulted on 1 June 2011).
- Renaud, Fabrice, Janos J. Bogardi, Olivia Dun, and Koko Warner, 'Control, Adapt or Flee: How to Face Environmental Migration?', *Interdisciplinary Security Connections* n.5/ 2007, United Nations University Institute for Environment and Human Security (UNU-EHS) available at <http://web.ebscohost.com.eproxy.ucd.ie/ehost/pdfviewer/pdfviewer?sid=78ed3f9b-f1ea-44bb-a300-a49abc11d552%40sessionmgr15&vid=8&hid=19> (consulted on 15 April 2011).
- Seglow, Jonathan (a), 'Immigration justice and borders: towards a global agreement' in *Contemporary Politics*, pp. 233-246, Vol. 12, n. 3-4, 2006.
- Seglow, Jonathan (b), 'Immigration and Global Justice', Royal Holloway Department of Politics and International Relations Working Paper Series, 1, April 2006, available at http://www.rhul.ac.uk/politics-and-ir/Working-Papers/RHUL-PIR_Working_Paper-01_Seglow_Immigration_Global_Justice.pdf (consulted on 18 April 2011).
- Stephen, Sarah, 'Howard's Pacific solution' is neo-colonialism' in *Green Left*, 28 November 2001 available at <http://www.greenleft.org.au/node/23795> (consulted on 8 May 2011).
- Taylor, Savitri, 'The Pacific Solution or a Pacific nightmare? The difference between burden shifting and responsibility sharing', pp. 1-43 in *Asian Pacific Law and Policy Journal*, Vol. 6, Issue 1, 2005.

- Thielemann, Eiko R., 'Burden Sharing: The International Politics of Refugee Protection' Department of Government & European Institute London School of Economics and Political Science Working Paper Series, 134, March 2006, available at <http://www.ccis-ucsd.org/PUBLICATIONS/wrkg134.pdf> (consulted on 20 April 2011).

- Trenbert, Kevin E. & Hoar, Timothy J., 'El Niño and climate change', pp. 3057-3060 in *Geophysical Research Letters*, Vol. 24, n. 23, 1997.

- Sercombe, Bob & Albanese, Antony, 'Our Drowning Neighbours: Labor's Policy Discussion Paper on Climate Change in the Pacific', Australian Labor Party, 2007 available at http://parlinfo.aph.gov.au/parlInfo/download/library/partypol/U6FI6/upload_binary/u6fi69.pdf;fileType%3Dapplication%2Fpdf (consulted on 20 April 2011).

- Shuck, Peter H., 'Refugee Burden Sharing: A Model Proposal', pp. 243-398 in *Yale Journal of International Law*, Vol. 22, 1997.

- Simms, Andrew, & Molly Conisbee, *Environmental Refugees, The Case for Recognition*. New Economics Foundation, 2003.

- Singer, Peter, *One World. The Ethics of Globalization*. Yale University Press: 2002.

- Suhurke, Astri, 'Burden-sharing during Refugee Emergencies: The Logic of Collective versus National Action', pp. 396-415 in *Journal of Refugee Studies*, Vol. 11(4), 1998.

- Trujillo, Isabel, *Giustizia Globale. Le nuove frontiere dell'eguaglianza*. Bologna: Il Mulino, 2007.

- Walzer, Michael, 'The distribution of Membership', pp.1-35, in Peter G. Brown and Henry Shue, (eds.), *Boundaries: National Autonomy and its Limits*. Totowa: Rowman and Littlefield, 1981.
- Westra, Laura, *Environmental Justice & the rights of Ecological Refugees*, London: Earthscan, 2009.
- Williams, Angela, 'Turning the Tide: Recognising Climate Change Refugees in International Law', pp. 502–529 in *Law & Policy*, Vol. 30, 2008.
- Wynn, Gerard, 'What was agreed and left unfinished in U.N. climate deal', 20 December 2009 available at <http://in.reuters.com/article/2009/12/20/idINIndia-44872920091220?sp=true> (consulted on 6 May 2011).
- Yamamoto, Lilian & Esteban Miguel, 'Vanishing Island States and Sovereignty' pp.1-9 in *Ocean and Coastal Management*, Vol. 53, Issue 1.

List of Documents

- Alliance of Small island States (AOSIS), Draft Protocol to the United Nations Framework Convention on Climate Change on Greenhouse Gas Emissions Reduction, A/AC.237/L.23, 27 September 1994 available at <http://unfccc.int/resource/docs/a/123.pdf> (consulted on 3 May 2011).
- Cartagena Declaration on Refugees, adopted by the Colloquium on the International Protection of Refugees in Central America, Mexico and Panama, 22 November 1984, available at <http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?page=search&docid=3ae6b36ec> (consulted on 12 April 2011).
- Convention of Geneva Relating to the Status of Refugees, adopted by the UN General Assembly on 28 July 1951, entered into force on 22 April 1954, GA Res.

429 (V), art. 1(2)A, available at <http://www.unhcr.org/pages/49da0e466.html> (consulted on 4 April 2011).

- Copenhagen Accord, adopted by the Conference of the Parties to the UNFCCC, Fifteen Session (COP-15), 18 December 2009, UN Doc. FCCC/CP/2009/L.7, available at <http://unfccc.int/resource/docs/2009/cop15/eng/107.pdf> (consulted on 2 April 2011).

- Declaration of the United Nations Conference on the Human Environment, adopted on 16 June 1972, UN. DOC A/CONF 48/14, available at <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503> (consulted on 10 April 2011).

- Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted 11 December 1997, entered into force 16 February 2005, UN Doc FCCC/CP/1997/7/Add.1, available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf> (consulted on 2 April 2011).

- Montevideo Convention on Rights and Duties of States, adopted 26 December 1933, entered into force 26 December 1934 available at [http://www.cosmopolitikos.com/Documents/Montevideo%20\(1933\).pdf](http://www.cosmopolitikos.com/Documents/Montevideo%20(1933).pdf) (consulted on 3 May 2011).

- Office of the United Nations High Commissioner for Human Rights (OHCHR), Report on the relationship between climate change and human rights, A/HRC/10/61, 15 January 2009 available at <http://www.ohchr.org/Documents/Press/AnalyticalStudy.pdf> (consulted on the 10 June 2011).

- Organization of African Unity (OAU), Convention Governing the Specific Aspects of Refugee Problems in Africa, adopted by the Heads of African State and Government on 10 September 1969, entered into force on 20 June 1974, available at [http://www.africa-union.org/Official_documents/Treaties %20Conventions %20Protocols/Refugee Convention.pdf](http://www.africa-union.org/Official_documents/Treaties%20Conventions%20Protocols/Refugee_Convention.pdf) (consulted on 11 April 2011).

- United Nations Declaration on the Establishment of a New International Economic Order adopted 1 May 1974), UN Doc. A/RES/3201 (S-VI), available at <http://daccess-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/071/94/IMG/NR007194.pdf?OpenElement> (consulted on 15 May 2011).

- United Nations Framework Convention on Climate Change (UNFCCC), adopted 29 May 1992, entered into force 21 March 1994, FCCC/INFORMAL/84 available at <http://unfccc.int/resource/docs/convkp/conveng.pdf> (consulted on 4 April 2011).

- United Nations Framework Convention on Climate Change (UNFCCC), Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its seventh session, held in Bangkok from 28 September to 9 October 2009, and Barcelona from 2 to 6 November 2009, UN doc FCCC/AWGLCA/2009/14, 20 November 2009 available at <http://unfccc.int/resource/docs/2009/awglca7/eng/14.pdf> (consulted on the 5 June 2011).

- United Nations High Commissioner for Refugees (UNHCR), EXCOM Conclusion n. 39 (XXXVI), 1985 available at <http://www.unhcr.org/3ae68c43a8.html> (consulted on 10 April 2011).

- Universal Declaration of Human Rights, adopted by the UN General assembly on 10 December 1948, GA Res. 217 A (III), available at <http://www.ohchr.org/en/udhr/pages/introduction.aspx> (consulted on 10 April 2011).

Internet

- Amnesty International, *Malaysia refugee swap: trading in human lives*, 26 May 2011 available at <http://www.amnesty.org.au/news/comments/25763/> (consulted on 1 June 2011).

- Australian Government. Department of Climate Change and Energy Efficiency, *Reducing Australia Emissions*, April 2011 available at <http://www.climatechange.gov.au/government/reduce.aspx> (consulted on 11 May 2011).

- Centre for International Sustainable Development Law (CISDL), *The Principle of Common but Differentiated Responsibilities. Draft Working Paper*, March 2005, available at http://www.cisd.org/pdf/sdl/SDL_Common_but_Diff.pdf (consulted on 6 June 2011).

- Central Intelligence Agency (CIA), *The World Factbook: Tuvalu*, May 2011 available at <https://www.cia.gov/library/publications/the-world-factbook/geos/tv.html> (consulted on 4 April 2011).

- European Environmental Agency (EEA), *Vulnerability and Adaptation to Climate Change in Europe*, Technical Report n.7, 7 December 2005, available at http://www.eea.europa.eu/publications/technical_report_2005_1207_144937 (consulted on 5 May 2011).

- Foundation for International Environmental Law and Development (FIELD), *Receding maritime zones, uninhabitable states and climate exiles. How international law must adapt to climate change*, May 2011, available at http://www.field.org.uk/files/climate_exiles_dw.pdf (consulted on 9 April 2011).

- Friends of the Earth, *A Citizens Guide to Climate refugees*, 2005, available at <http://www.foe.org.au/resources/publications/climatejustice/CitizensGuide.pdf/view> (consulted on 10 April 2011).

- German Advisory Council on Global Change (WBGU), *World in Transition: Climate Change as a Security Risk*, 29 May 2007 available at: http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/hauptgutachten/jg2007/wbgu_jg2007_kurz_engl.pdf (consulted on 4 May 2011).

- Government of Tuvalu, *Tuvalu Initial National Communication Under the United Nations Framework Convention on Climate Change*, October 1999 available at <http://unfccc.int/resource/docs/natc/tuvnc1.pdf> (consulted on 12 April 2011).

- Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: Impacts, Adaptation and Vulnerability*, available at: http://www.grida.no/climate/ipcc_tar/wg2/pdf/wg2TARfrontmatter.pdf (consulted on the 4 May 2011).

- Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis*, available at http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html (consulted on the 29 April 2011).

- Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Impacts, Adaptation and Vulnerability*, available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter16.pdf> (consulted on 12 May 2011).

- International Service for Human Rights (ISHR), *Simple Guide to UN Treaty Bodies*, July 2010 available at <http://www.ishr.ch/guides-to-the-un-system/simple-guide-to-treaty-bodies> (consulted on 5 May 2011).

- Ministry of Natural Resources, Environment, Agriculture and Lands, Department of Environment, *Tuvalu's National Adaptation Programme of Action (NAPA)*, 2007 available at <http://unfccc.int/resource/docs/napa/tuv01.pdf> (consulted on 7 April 2011).

- New Zealand Ministry for the Environment, *New Zealand's Green House Gas Inventory 1990-2009. Environmental Snapshot*, April 2011, available at <http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2011-snapshot/index.html> (consulted on 13 April 2011).

- New Zealand Ministry of Foreign Affairs and Trade, *New Zealand's Immigration Relationship with Tuvalu*, August 2009 available at

<http://www.mfat.govt.nz/Foreign-Relations/Pacific/NZ-Tuvalu-immigration.php>
(consulted on 13 May 2011).

- Organisation for the Economic Cooperation and Development (OECD), *Economic Surveys: New Zealand*, 2009 available at <http://www.oecd.org/dataoecd/62/41/42564695.pdf> (consulted on 10 April 2011).
- Pacific Islands Forum Secretariat (PIFS), *Forum Communiqué*, Thirty –Ninth Pacific Islands Forum, Alofi, Niue, 19-20 August 2008 available at <http://www.spc.int/sppu/images/stories/2008%20communiqué%20forum.pdf> (consulted on 15 May 2011).
- Refugee Review Tribunal-Australia (RRTA) Case No. 0907346, [2009] RRTA 1168, 10 December 2009, available at <http://www.unhcr.org/refworld/docid/4b8fdd952.html> (consulted on 22 June 2011).
- Secretariat of the Pacific regional Environment Programme (SPREP), *Poznam Climate Conference*, 2009 available at http://www.sprep.org/documents/highlights/poznan/poznanhighlights_low-res.pdf (consulted on 10 May 2011)
- South Pacific Applied Geoscience Commission (SOPAC), *Building capacity to ensure against disaster in Tuvalu*, Technical Report n. 380, June 2005, available at <http://www.sopac.int/data/virlib/TR/TR0380.pdf> (consulted on 12 May 2011).
- South Pacific Applied Geoscience Commission (SOPAC) , *National Integrated Water Resource Management. Diagnostic Report for Tuvalu*, November 2007, available at http://www.pacificwater.org/userfiles/file/GEF%20IWRM%20Final%20Docs/SOPAC%20Diagnostic%20Report%20Tuvalu%2022_10_07.pdf (consulted on 12 May 2011).
- United States Committee for Refugees (USCR), *Sea Change: Australia's New Approach to Asylum Seekers*, 2002, available at <http://www.safecom.org.au/pdfs/australia.pdf> (consulted on 11 May 2011).

- United Nations Conference on Trade and Development (UNCTAD), *Vulnerability profile of Tuvalu*, 29 January 2009, available at http://www.un.org/en/development/desa/policy/cdp/ldc/profile/vulnerability_profile_tuvalu.pdf (consulted on 10 May 2011).

- United Nations Office of the High Commissioner for Human Rights (OHCHR), *Climate Change, Migration and Human Rights*. Address by Ms. Kyung-wha Kang Deputy High Commissioner for Human Rights, Conference on Climate Change and Migration: Addressing Vulnerabilities and Harnessing Opportunities (19 February 2008) available at <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=9162&LangID=E> (consulted on 4 April 2011).

- United Nations High Commissioner for Refugees (UNHCR), Handbook on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol Relating to the Status of Refugees, 1992, available at <http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?page=search&docid=3ae6b3314>.

- United Nations High Commissioner for Refugees (UNHCR), *Climate change, natural disasters and human displacement: a UNHCR perspective*, October 2008 available at <http://www.unhcr.org/refworld/pdfid/492bb6b92.pdf> (consulted on 15 April 2011).

