

# CHANGE, SEA LEVEL RISE AND PROTECTING DISPLACED COASTAL COMMUNITIES: POSSIBLE SOLUTIONS

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Climate change and sea level rise are realities that are upon us which will profoundly impact the lives and basic rights of millions of coastal residents all over the world. As the law stands both at the international and at certain national levels, the basic human rights of the climate displaced are not adequately protected. This paper identifies two possible displacement scenarios, based on the continued availability/non-availability of land in the face of sea level rise and other climate change impacts, namely, the sinking Small Island Developing States phenomenon where land disappears and there is no surplus land to support habitation and all other cases where the coastal land is battered severely but it can be re-utilised through appropriate adaptation measures or even if coastal frontage land disappears there is still land available inland. On this basis, it forwards three possible solutions: 1) bilateral or regional treaties to facilitate resettlement of the inhabitants of sinking Small Island Developing States, 2) appropriate coastal climate change adaptation implemented via integrated coastal zone management and 3) creation of new arrangements under the international climate change regime to provide financial assistance and technological support to respond to both situations. Even though the primary focus of this paper is on coastal communities in South Asia, the lessons that it offers are relevant to other coastal contexts as well.

## I INTRODUCTION

The River Indus, the lifeline of Pakistan originates in China, flows through India to enter Pakistan watering its landmass and before it joins the Arabian Sea it creates the Indus river delta.<sup>1</sup> Home to nearly 900,000 people, it is a Ramsar site and has the distinction of being the fifth largest delta in world that houses the seventh largest mangrove forest system.<sup>2</sup> This delta is under severe stress due to sea level rise (SLR) and the large-scale

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<sup>1</sup> See generally Peter John Meynell & M Tahir Qureshi, "Sustainable Management of Mangroves in the Indus Delta, Pakistan" in TJ Davis, ed, *Towards the Wise Use of Wetlands*, Wise Use Project (Gland, Switzerland: Ramsar Convention Bureau, 1993) online: Ramsar Convention <[http://www.ramsar.org/cda/en/ramsar-pubs-books-towards-wise-use-of-21381/main/ramsar/1-30-01%5E21381\\_4000\\_0\\_#cs1](http://www.ramsar.org/cda/en/ramsar-pubs-books-towards-wise-use-of-21381/main/ramsar/1-30-01%5E21381_4000_0_#cs1)>.

<sup>2</sup> *Indus Delta, Pakistan*, online: WWF <[http://wwf.panda.org/what\\_we\\_do/where\\_we\\_work/indus\\_delta/](http://wwf.panda.org/what_we_do/where_we_work/indus_delta/)>.

abstraction of water in the upstream areas to support agriculture and other activities.<sup>3</sup> Increased salinity, inundation and other extreme weather events is wrecking this delta contaminating water and land, leading to crop destruction, reduction in fish catch, loss of employment opportunities, and more importantly, migration of coastal communities.<sup>4</sup> This story is not an isolated one and it is being repeated in other parts of South Asia and even beyond as well. Coastal communities in the Sunderbans in Bangladesh and India, the Jarawas in the Bay of Bengal, the fishing communities in the Maldives, the Inuit in the Arctic, the Cayos Miskito in Nicaragua, the Vezo people in Madagascar, and countless other traditional coastal communities all have similar tales of environmental degradation, destruction and displacement to narrate. Indeed, one of the gravest impacts of climate change is that it will uproot millions. Nearly 36 million people were displaced by “sudden-onset natural disasters” in 2008, most of which was climate related.<sup>5</sup> That number jumped to 38.3 million in 2010. It is estimated that by 2050, the number of people forced to move out due to climate change will range from 25 million to one billion.<sup>6</sup>

While droughts, desertification and food shortages can trigger migrations and cross-border movements;<sup>7</sup> climate-change-induced migrations will almost exclusively be a developing country crisis due to huge population numbers, widespread poverty, and lack

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<sup>3</sup> See Tony George Puthucherril, “Adapting to Climate Change and Accelerated Sea-Level Rise through Integrated Coastal Zone Management Laws: A Study of the South Asian Experience” in Aldo Chircop, Scott Coffen-Smout & Moira McConnell, eds, *Ocean Yearbook*, vol 26 (Leiden: The Netherlands, 2012) 533 at 577 [Puthucherril, “Adapting to Climate Change”].

<sup>4</sup> Amar Guriro, “Mighty Indus has its delta ripped”, *PakistanToday* (9 July 2011) online: PakistanToday <<http://www.pakistantoday.com.pk/2011/07/09/city/karachi/mighty-indus-has-its-delta-ripped/>> (pointing out that nearly 14,400 people, majority of them fishermen, living in 57 coastal villages have migrated to other places in search of better livelihood between the period from April 2000 to April 2010).

<sup>5</sup> See generally OCHA, IDMC & NRC, *Monitoring Disaster Displacement in the Context of Climate Change: Findings of a Study by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre* (Switzerland, United Nations Office for Coordination of Humanitarian Affairs, 2009).

<sup>6</sup> See generally Informal Group on Migration/Displacement and Climate Change of the IASC, *Climate Change, Migration and Displacement: Who Will be Affected?* (Working Paper, 31 October 2008) [Informal Group on Migration/Displacement].

<sup>7</sup> See generally Koko Warner et al, *In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement* (CARE International, 2009).

of good governance.<sup>8</sup> The problem will be particularly acute for populations in low-elevation coastal zones, which accommodate nearly 10.5 per cent of the world's population.<sup>9</sup> Rising sea levels are rendering substantial coastal areas of the world uninhabitable, with the consequence that several communities have already begun their exodus.<sup>10</sup> It is forecasted that rising seas will inundate large portions of nearly forty Small Island Developing States (SIDS),<sup>11</sup> leading to the "sinking" small islands phenomenon.<sup>12</sup>

One of the major theatres where climate-change displacement will be played out in its extremity is South Asia, particularly, its coastal regions. It is estimated that nearly 125 million people will migrate in the coming century of which 75 million will be from Bangladesh who will most likely migrate to India. At the same time, India will be saddled with nearly 50 to 60 million people because of SLR.<sup>13</sup> Another study points out that 146 million people live less than one meter above sea level in the major rivers, deltas, estuaries, and flood zones in South and East Asia.<sup>14</sup> Thus, these two regions account for 75 per cent of the population at risk. In extreme cases, entire nations like the Maldives may need to be relocated.<sup>15</sup>

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<sup>8</sup> Jon Barnett & Michael Webber, "Migration as Adaptation: Opportunities and Limits" in Jane McAdam, ed, *Climate Change and Displacement Multidisciplinary Perspectives* (Oxford and Portland, Oregon: Hart Publishing, 2010) 37 at 38, 55.

<sup>9</sup> Etienne Piguet, *New Issues in Refugee Research: Climate Change and Forced Migration*, PDES Working Papers (Research Paper No 153, 2008) at 7.

<sup>10</sup> See Richard Shears, "The world's first climate change refugees to leave island due to rising sea levels", *MailOnline* (18 December 2007), online: MailOnline <<http://www.dailymail.co.uk/news/article-503228/The-worlds-climate-change-refugees-leave-island-rising-sea-levels.html>>. See also Neil Tweedie, "Carteret Islands: 'The sea is killing our island paradise'", *The Telegraph* (9 December 2009) online: The Telegraph <<http://www.telegraph.co.uk/earth/carteret-islands/6771651/The-sea-is-kill-ing-our-island-paradise.html>>. Already, in Papua New Guinea, inhabitants of the Carteret Islands and the Duke of York Islands had to be relocated. In the Maldives, the residents in the island of Kandholhudoo had to be relocated because of the tsunami. See Susin Park, *Climate Change and the Risk of Statelessness: The Situation of Low-lying Island States*, UNHCR, Legal and Protection Policy Research Series, PLA/2011/04 (Switzerland: Division of International Protection, 2011) at 2-3. See also Walter Kälin & Nina Schrepfer, *Protecting People Crossing Borders in the Context of Climate Change Normative Gaps and Possible Approaches*, UNHCR, Legal and Protection Policy Research Series, PPLA/2012/01 (Switzerland: Division of International Protection, 2012) at 2-3.

<sup>11</sup> See Koko Warner et al, *In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement* (CARE International, 2009) at 18-19.

<sup>12</sup> See *Submission: Climate Change and Statelessness: An Overview*, UNHCR (15 May 2009) at 1 [*Submission: Climate Change and Statelessness*].

<sup>13</sup> Sudhir Chella Rajan, *Blue Alert: Climate Migrants in South Asia: Estimates and Solutions – A Report by Greenpeace* (Chennai: Greenpeace India Society, 2008) at 1.

<sup>14</sup> Piguet, *supra* note 9 at 8.

<sup>15</sup> See Puthucherril, "Adapting to Climate Change", *supra* note 3 at 573.

The four sub-parts of the narrative in this paper are anchored in the dire situation facing the coastal communities of South Asia due to climate change. Apart from this introduction, the second part is an overview of the phenomenon of climate change and SLR and relevant terminology and classifications. Next, in Part III, some of the problems faced by internally displaced will be examined. Here, the role of law and the interrelationship between disaster management, relief and rehabilitation will be discussed, as will the usefulness of the voluntary UN Guiding Principles on Internal Displacement, 1998 (Guiding Principles) in protecting the rights of the internally displaced.<sup>16</sup> The Indian Ocean tsunami of 2004 and the response of the most badly affected South Asian coastal countries – India and Sri Lanka – will be used as a reference point to examine some of the possible problems that coastal communities will face in the event of SLR and other climate change spurred natural disasters. The fourth part is an analysis of the legal issues encountered by climate-change-displaced persons when they cross international borders. The fifth part examines the central question that this paper raises namely whether we should develop a new treaty to protect the interests of the climate displaced or whether we should rely more on coastal climate change adaptation (CCCA). The paper concludes with a plea to strengthen CCA as a plausible strategy to protect the rights of the climate-displaced persons, and the creation of an international fund to assist them in rebuilding their lives.

## II CLIMATE CHANGE, SEA LEVEL RISE: CLASSIFYING THE CLIMATE-DISPLACED AND IDENTIFYING TWO IMPACT-RELATED SCENARIOS

### A *The Underlying Science of Anthropogenic Climate Change, Sea Level Rise and an Overview of Climate Change Impacts*

Basic science informs us that it is the “heat trapping”<sup>17</sup> feature of GHGs that keeps the earth’s surface warm and thus plays an important role in sustaining life.<sup>18</sup> Presently, the

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<sup>16</sup> UNESCO, *Report of the Representative of the Secretary-General, Mr. Francis M. Deng, Submitted Pursuant to Commission Resolution 1997/39: Addendum: Guiding Principles on Internal Displacement*, E/CN.4/1998/53/Add.2, 11 February 1998 [*Guiding Principles on Internal Displacement*].

<sup>17</sup> See *Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States* (7 December

“earth’s heat budget”<sup>19</sup> is undergoing sweeping changes. Anthropogenic activities (mainly combustion of fossil fuels and coal-fired power plants) are adding huge quantities of GHGs to that which occurs naturally in the atmosphere. This is causing increased warming leading to the “enhanced green house effect”<sup>20</sup>, which produces far-reaching and unpredictable climatic changes affecting the integrity of a wide array of ecosystems.

In its Fourth Assessment Report, the IPCC forecasts that global temperatures will increase by 1.1 to 6.4 degrees Celsius by 2090-2099, relative to 1980-1999 levels. The sea level will also rise by 18 to 59 centimeters during the same period.<sup>21</sup> These calculations are based on six scenarios, excluding “future rapid dynamical changes in ice flow”.<sup>22</sup> Thus, these figures are at best conservative estimates, as they omit the fresh water input from glacial and ice cover melt into the oceans.<sup>23</sup> For instance, it is estimated that the West Antarctic ice sheet, which lies below the sea level, itself contains enough ice to raise the water by six meters.<sup>24</sup>

Two contributory factors that accelerate global SLR are thermal expansion of the oceans or the “steric effect” and the loss of glacial ice due to increased melting.<sup>25</sup> With the dumping of green house gases (GHGs) into the atmosphere on the ascendancy, it will increase atmospheric and oceanic temperatures leading to thermal expansion of the waters. The increased temperature will also produce more glacial melting and the shrinkage of polar ice sheets at rapid rates.<sup>26</sup> In addition, there are several other reasons that can also contribute to SLR like increased groundwater mining, impoundment in

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2005) at 28, online: INUIT <[http://www.inuitcircumpolar.com/files/uploads/icc-files/FINAL\\_PetitionICC.pdf](http://www.inuitcircumpolar.com/files/uploads/icc-files/FINAL_PetitionICC.pdf)> [*Inuit Petition*].

<sup>18</sup> Christina K Harper, “Climate Change and Tax Policy” (2007) 30:2 BC Int’l & Comp L Rev 411 at 412 (HeinOnline).

<sup>19</sup> *Inuit Petition*, *supra* note 17.

<sup>20</sup> “Climate Change 101: Science and Impacts” in *Climate Change 101: Understanding and Responding to Global Climate Change* (Pew Center on Global Climate Change, January 2001 update) 1 at 2.

<sup>21</sup> Core Writing Team, Rajendra K Pachauri & Andy Reisinger, eds, *Climate Change 2007: Synthesis Report* (Geneva: Intergovernmental Panel on Climate Change, 2008) 45.

<sup>22</sup> *Ibid*.

<sup>23</sup> *Ibid* at 44.

<sup>24</sup> JA Church et al, “Changes in Sea Level” in JT Houghton et al, eds, *Climate Change 2001: The Scientific Basis* (Cambridge: Cambridge University Press, 2001) 639 at 641.

<sup>25</sup> J Dronkers et al, eds, *Report of the Coastal Management Subgroup: Strategies for Adaption to Sea Level Rise* (Geneva: IPCC, Response Strategies Working Group, 1990) at 5.

<sup>26</sup> *Arctic Sea Ice Shrinks to New Low in Satellite Era (26 August 2012)*, online: NASA <<http://www.nasa.gov/topics/earth/features/arctic-seaice-2012.html>>.

reservoirs, increased runoff from urbanization, and deforestation.<sup>27</sup> Global warming can also lead to thawing of permafrost where ground ice gets converted into water, which can contribute to SLR.<sup>28</sup> Tectonics in coastal areas<sup>29</sup> and coastal subsidence in river delta regions can also lead to changes including SLR.<sup>30</sup> The impact on oceans goes beyond rising sea levels. Since the strength of hurricanes is based primarily on the heat of ocean surface waters, warming oceans will exacerbate hurricane and cyclone activity.<sup>31</sup> Apart from their devastation and consequent loss of life, powerful storms can prove severely destructive of biodiversity.<sup>32</sup> The uptake of anthropogenic carbon has led to ocean acidification, with an average decrease in pH by 0.1 units. It is expected that there will be an average reduction in global surface ocean pH by 0.14 and 0.35 units over the twenty-first century.<sup>33</sup> Excessive carbon sequestration and increased ocean acidification will dissolve coral reefs, thereby indirectly impacting coastal communities dependent on the reefs for their sustenance.<sup>34</sup> It is also believed that there could be a collapse of the North Atlantic thermohaline circulation, triggering other profound impacts.<sup>35</sup>

The signs of such a scenario are ominous. Already, sea levels are rising in some places, while glaciers are in retreat in others, wetlands and deltas are drowning, polar ice is melting at unprecedented levels, potable water is becoming scarcer, species are migrating, and there is increased disease and pestilence in coastal regions.<sup>36</sup> Higher

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<sup>27</sup> Church et al, *supra* note 41 at 658. See also *ibid* at 657.

<sup>28</sup> *Ibid* at 658.

<sup>29</sup> *Ibid*.

<sup>30</sup> *Ibid* at 659.

<sup>31</sup> "Climate Change 101: Science and Impacts," *supra* note 20 at 5. "Summary for Policymakers" in Core Writing Team, Rajendra K Pachauri & Andy Reisinger, eds, *Climate Change 2007: Synthesis Report* (Geneva: Intergovernmental Panel on Climate Change, 2008) 1 at 2 ["Summary for Policymakers" in *Climate Change 2007: Synthesis Report*] (noting that since the 1970s, observational evidence points out to intense tropical cyclone activity in North Atlantic).

<sup>32</sup> Commonwealth of Dominica, *Initial National Communication under the United Nations Framework Convention on Climate Change* (Roseau: Environmental Coordinating Unit, Ministry of Agriculture and the Environment, 2001) at 31 (reporting that Hurricane David, devastated the feeding and nesting sites of Dominica's endemic parrots and that the population of the two endangered parrots reached critical levels as low as 60 (*A. imperialis*) and 200 (*A. arausiaca*)).

<sup>33</sup> "Summary for Policymakers" in *Climate Change 2007: Synthesis Report, supra* note 31 at 9.

<sup>34</sup> *Ibid*.

<sup>35</sup> *Ibid* at 15.

<sup>36</sup> For further details on deltas, see "From the Report Accepted by Working Group II of the Intergovernmental Panel on Climate Change but not Approved in Detail: Cross-chapter Case Studies" in Parry et al, eds, *Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 2007) 844 at 858-62.

temperatures are facilitating invasion by non-native species.<sup>37</sup>

Some coastal nations like India, Bangladesh, Egypt, and Vietnam are particularly vulnerable due to large population concentrations in narrow coastal belts.<sup>38</sup> It has been estimated that Uruguay, Egypt, the Netherlands, Bangladesh and the Majuro Atoll in the Marshall Islands, will lose 0.05 per cent, one per cent, six per cent, 17.5 per cent, and 80 per cent, respectively of their land territory to the rising seas in the event of a one meter rise.<sup>39</sup> Even in nations that are not on the whole vulnerable to SLR, certain areas in these countries, for instance, places like Sydney, Shanghai, and coastal Louisiana stand seriously threatened because of SLR.<sup>40</sup> With each passing year, the Arctic ice is thinning and in 2007, the Arctic ice shrank to its smallest extent, opening up the Northwest Passage.<sup>41</sup>

Among a total of 52 SIDS,<sup>42</sup> countries like the Maldives, the Marshall Islands, Tuvalu, Kiribati, and Tokelau run the risk of being wiped out from the world map and are particularly vulnerable to SLR.<sup>43</sup> This is because they mainly consist of small atolls with little or no land and are situated only a few meters above the sea level. As a consequence, these SIDS are characterised by a poor natural resources base, low water sources, and

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<sup>37</sup> Changes are also expected in relation to physical and biological systems. Records show that several species have been moving pole-wards at an average rate of six kilometers per decade for the past 30 to 40 years. Nicholas Stern & The Cabinet Office – HM Treasury, *The Economics of Climate Change: The Stern Review* (New York: Cambridge University Press, 2007) at 7.

<sup>38</sup> Dronkers et al, eds, *supra* note 25 at 135. Tony George Puthucherril, "Operationalising Integrated Coastal Zone Management and Adapting to Sea Level Rise through Coastal Law: Where Does India Stand?" (2011) 26 *Int'l J Mar & Coast L* 569 at 573.

<sup>39</sup> "Summary for Policymakers: Scientific-Technical Analyses of Impacts, Adaptations, and Mitigation of Climate Change" in Robert T Watson, Marufu C Zinyowera & Richard H Moss, eds, *Climate Change 1995: Impacts, Adaptations, and Mitigation of Climate Change: Scientific-Technical Analyses, Contribution of Working Group II to the Second Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 1996) 1 at 11.

<sup>40</sup> World Meteorological Organization, United Nations Environment Program & Intergovernmental Panel on Climate Change, *Climate Change: The IPCC Response Strategies* (Washington DC: Island Press, 1991) at 135.

<sup>41</sup> "Climate Change 101: Science and Impacts," *supra* note 20 at 6.

<sup>42</sup> *List of Small Island Developing States (UN Members) and Non-UN Members/Associate Members of the Regional Commissions*, online: UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States <<http://www.un.org/special-rep/ohrls/sid/list.htm>>.

<sup>43</sup> UNFCCC, *Vulnerability and Adaptation to Climate Change in Small Island Developing States*, Background Paper for the Expert Meeting on Adaptation for Small Island Developing States, online: UNFCCC <[http://unfccc.int/files/adaptation/adverse\\_effects\\_and\\_response\\_measures\\_art\\_48/application/pdf/200702\\_sids\\_adaptation\\_bg.pdf](http://unfccc.int/files/adaptation/adverse_effects_and_response_measures_art_48/application/pdf/200702_sids_adaptation_bg.pdf)> at 4.

poor soil quality that cannot support intensive farming.<sup>44</sup> Generally, the primary sources of revenue for these islands are from tourism and fishing, and most food is imported. Any changes in weather can upset the delicate balance and throw these countries into turmoil.<sup>45</sup>

In sum, there is incontrovertible scientific evidence that climate change is a reality and that eustatic SLR is unfolding earlier than predicted. Already the earth's climate has changed substantially for the worse, and in the foreseeable future, it will be subjected to considerably more tumultuous changes. Climatologists point out to an interesting aspect of the phenomenon of climate change. They tell us that even if we are successful in stabilising or in reducing GHG emissions, given the existing quantities of GHGs in the atmosphere, it will continue to push the temperature up. This will increase the sea levels for decades and even for centuries, churning out other catastrophic consequences.<sup>46</sup> These ubiquitous changes when combined with the rampant development in coastal areas which have considerably reduced the resilience of several of the coastal ecosystems and their ability to absorb the impact of climate change related processes, produces a situation that is highly vulnerable, dangerous and destructive. In the subsequent paragraphs, an overview is provided on the issue of climate related displacement, and related vocabulary in vogue.

## B *Terminology and Classifying the Climate-Displaced*

For millennia, humans have relied on migration as a practical response to extreme climatic events and natural disasters such as droughts and floods,<sup>47</sup> and these movements have played an important role in shaping the course of human history. With climate

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<sup>44</sup> Subsistence and plantation agriculture in the Solomon Islands is already under severe stress because of climate change and SLR. Solomon Islands, *Initial National Communications under the United Nations Framework Convention on Climate Change*, at 26, online: UNFCCC <<http://unfccc.int/resource/docs/natc/slbnc1.pdf>>.

<sup>45</sup> For instance, the health impacts can be particularly severe. See Vanuatu, *National Communication to the Conference of the Parties to the United Nations Framework Convention on Climate Change* (1999) at 28.

<sup>46</sup> Luitzen Bijlsma, et al, eds, *Preparing to Meet the Coastal Challenges of the 21st Century: Conference Report World Coast Conference 1993* (The Netherlands: Ministry of Public Works and Water Management, April 1994) at 9.

<sup>47</sup> Tom Wilbanks & Patricia Romero Lankao, "Industry, Settlement and Society" in ML Parry et al, eds, *Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 2007) 357 at 365.



change and other related events, ever-growing numbers of people are being forced from their homes.<sup>48</sup> Coastal areas, cities, and even entire countries may soon be lost to rising seas, necessitating migrations to new places in search of security, stability and livelihood.<sup>49</sup> In many coastal regions, salinity ingress has already rendered many coastal communities dysfunctional by contaminating freshwater lens, aquifers, and agriculture.<sup>50</sup>

For the displaced coastal populations, re-settlement can be an overwhelming experience on psychological, cultural and economic levels. For the sake of clarity in this research, displaced populations are classified into two categories. The first and largest category consists of those displaced internally by climate-change-related phenomena (i.e., displaced populations will move within the boundaries of their own country).<sup>51</sup> The second category consists of people forced to cross international borders.<sup>52</sup> This category includes the inhabitants of small-island developing states as well as inhabitants of countries with scant land and whose resources are already stretched to the limit. In addition to facilitating clarity, this classification will help us determine the nature of the rights available to both of these groups.

A related aspect that should be mentioned here is that climate change and SLR lead to two specific situations. The first is a slow onset disaster scenario characterized by the gradual degradation of a coastal environment, forcing people to relocate over a period of time.<sup>53</sup> While the impact is more direct, there is scope to implement adaptation actions. The second situation is the occurrence of intense and sudden disasters such as severe storm surges, hurricanes, tsunamis, and earthquakes, which can overturn coastal life literally overnight.<sup>54</sup> Though not directly attributable to the climate change phenomenon,

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<sup>48</sup> *UNHCR Climate Change, Natural Disasters and Human Displacement: A UNHCR Perspective*, UNHCR [nd] at 3, online: UNHCR <<http://www.unhcr.org/4901e81a4.html>> [*UNHCR Climate Change, Natural Disasters*] (reporting that nine out of every ten natural disasters today are climate-related. The Norwegian Refugee Council indicates that as 20 million people may have been displaced due to climate-induced sudden-onset natural disasters in 2008 alone).

<sup>49</sup> Stern & HM Treasury, *supra* note 37 at 112.

<sup>50</sup> *Submission: Climate Change and Statelessness*, *supra* note 12 at 2.

<sup>51</sup> *UNHCR Climate Change, Natural Disasters*, *supra* note 48 at 2.

<sup>52</sup> Barnett & Webber, *supra* note 8 at 40.

<sup>53</sup> See also Walter Kälin, "Conceptualising Climate-Induced Displacement" in Jane McAdam, ed, *Climate Change and Displacement: Multidisciplinary Perspectives* (Oxford and Portland, Oregon: Hart Publishing, 2010) 81 at 85.

<sup>54</sup> While the link between global warming and stronger hurricane activity is yet to be clearly deciphered, the IPCC affirms that, "[t]here is observational evidence for an increase of intense tropical cyclone activity in the North Atlantic since about 1970, correlated with increases of

the impact of sudden-onset natural disasters will be greatly aggravated by climate change and SLR. In the immediate short term, these devastating weather events and natural disasters raise the need for disaster management and, subsequently, relief and rehabilitation for the displaced.

Descriptive terms such as “environmental refugees”,<sup>55</sup> “climate change refugees”<sup>56</sup> and “environmental migrants”<sup>57</sup> have been coined to label those who cross international borders due to climate-change-related factors.<sup>58</sup> However, the Office of the United Nations High Commissioner for Refugees (UNHCR) has serious reservations about the use of such terms, as they have no foundation in international refugee law.<sup>59</sup>

[w]hile often used, particularly in the media, it would be incorrect to give the words a legal meaning that has not been endorsed by the legal community. UNHCR is actually of the opinion that the use of such terminology could potentially undermine the international legal regime for the protection of refugees whose rights and obligations are quite clearly defined and understood.... While environmental factors can contribute to prompting cross-border movements, they are not grounds, in and of themselves, for the grant of refugee status under international refugee law. However, UNHCR does recognise that there are indeed certain groups of migrants, currently falling outside of the scope of international protection, who are in need of humanitarian and/or other forms of assistance.<sup>60</sup>

At the Nansen Conference, their usage was once again decried due to the legal

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tropical sea surface temperatures.” “Summary for Policymakers” in Susan Solomon et al, eds, *Climate Change 2007: The Physical Science Basis* (Cambridge: Cambridge University Press, 2007) 1 at 9 [“Summary for Policymakers” in *Physical Science*].

<sup>55</sup> See generally Silke Marie Christiansen, *Environmental Refugees: A Legal Perspective* (Nijmegen: Wolf Legal Publishers, 2010).

<sup>56</sup> Tiffany TV Duong, “When Islands Drown: The Plight of “Climate Change Refugees” and Recourse to International Human Rights Law” (2010) 31 U Pa J Int’l L 1239 at 1250 (HeinOnline).

<sup>57</sup> “Environmental migrants are persons or groups of persons who, for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to have to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their territory or abroad.” *Ninety-Fourth Session: Discussion Note: Migration and the Environment*, MC/INF/288, 1 November 2007, ¶6 at 1, online: International Organization for Migration <[http://www.iom.int/jahia/webdav/shared/shared/main/site/about\\_iom/en/council/94/MC\\_INF\\_288.pdf](http://www.iom.int/jahia/webdav/shared/shared/main/site/about_iom/en/council/94/MC_INF_288.pdf)>.

<sup>58</sup> Kälin & Schrepfer, *supra* note 10 at 27-8.

<sup>59</sup> *UNHCR Climate Change, Natural Disasters*, *supra* note 48 at 8.

<sup>60</sup> *Ibid* at 8, 9.

incorrectness implicit in the terms climate refugees and environmental refugees, and so the term “environmentally displaced persons” found more favor.<sup>61</sup> However, “environmentally displaced persons” also suffers from the same inconsistencies that plague the other terms in that it fails to relay the nuances between internal and external migrations in situations where climate change is the causative factor for the migration. Accordingly, in this paper, I will rely on the following two terms to describe the two groups namely, “Climate Change Internally Displaced” and “those Displaced by Climate Change who have Crossed International Borders”. The next section articulates the rights available to both these groups under relevant domestic (India and Sri Lanka are used as examples) and international law.

Before proceeding to that analysis, it must be pointed out that climate related displacement could be subject to yet another important classification depending on the degree of possible impacts, and the continued availability of land, the basic resource to support human habitation. The first is the worst-case scenarios as in the case of sinking SIDS where SLR and climate change could ultimately lead to a situation of deterritorialization, displacement, statelessness and eventual crossing of international borders.<sup>62</sup> The second contemplates situations where the impact of the climate hazards and SLR are extremely severe and land degradation and water contamination is very high. Even if coastal frontage is lost to the rising waves, there is still the possibility of utilising land available inland for rehabilitation.<sup>63</sup> As well, there is the possibility that through appropriate adaptation measures (anticipatory and reactive),<sup>64</sup> land-use<sup>65</sup> and

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<sup>61</sup> *The Nansen Conference: Climate Change and Displacement in the 21st Century, Oslo, Norway, June 5-7, 2011* (Norwegian Refugee Council, 2011) at 19 [*The Nansen Conference*].

<sup>62</sup> The IPCC observes that “[s]ea-level rise impacts on the low-lying Pacific Island atoll States of Kiribati, Tuvalu, Tokelau and the Marshall Islands may, at some threshold, pose risks to their sovereignty or existence.” W Neil Adger, Shardul Agrawala & M Monirul Qader Mirza, “Assessment of Adaptation Practices, Options, Constraints and Capacity” in ML Parry et al, eds, *Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge: Cambridge University Press, 2007) 717 at 736.

<sup>63</sup> For instance, Bangladesh is one of the most densely populated nations in the world, and land is scarce. Nevertheless, through a right mix of adaptation strategies, land use and water management, up-land areas may still be able to accommodate displaced coastal populations. See Jane McAdam, “Swimming against the Tide: Why a Climate Change Displacement Treaty is Not the Answer” (2011) 23:1 Int’l J Refugee L 2 at 12 [McAdam, “Swimming”].

<sup>64</sup> For an overview of the different adaptation strategies, see generally Jessica Grannis, *Adaptation Tool Kit: Sea-Level Rise and Coastal Land Use* (Georgetown Climate Center, 2011).

water management strategies<sup>66</sup> the degraded land can be nursed back to continue to support human habitation.

### III PROTECTING THE CLIMATE CHANGE INTERNALLY DISPLACED: DISASTER MANAGEMENT, RELIEF AND REHABILITATION

People suffering from dwindling fish catches, reduced water supplies and failed crops, or whose habitations have been claimed by rising seas or a storm event, are likely to willingly relocate. Technically, these groups may be able to access the guarantees contained in the UN Guiding Principles on Internal Displacement, which defines internally displaced persons as “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.”<sup>67</sup> By including those displaced by “natural or human-made disasters,”<sup>68</sup> people who are displaced by climate change are recognized by the Guiding Principles on Internal Displacement. Nonetheless, even though this document is widely accepted by nations, it has no legal consequence. Given the possibility that extreme weather events will ravage coastal regions with increased frequency, leading to massive displacements and the total breakdown of coastal communities, relief and rehabilitation will have to be viewed through a disaster management lens.<sup>69</sup>

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<sup>65</sup> "Floating Gardens in Bangladesh", *Practical Action: Technology Challenging Poverty: Technical Brief*, online: FAO <<http://www.fao.org/climatechange/17849-0e277b46b31f98942e6bc81bb22319243.pdf>>.

<sup>66</sup> RF Michael Snodgrass, Note, "The Reuse of Household Water: A Small Step Toward Sustainable Living and Adaptation to Climate Change" (2010) 22 *Geo. Int'l Envtl L Rev* 591 (QL) (advocating the widespread use of grey water); J Mwenge Kahinda, AE Taigbenu, RJ Boroto, "Domestic Rainwater Harvesting as an Adaptation Measure to Climate Change in South Africa" (2010) *Parts A/B/C 35:13-14 Physics & Chemistry of The Earth* Pages 742 (ScienceDirect) (listing rainwater harvesting as one of the specific adaptation measures for water-stressed Africa). See generally World Water Assessment Programme, *Managing Water under Uncertainty and Risk*, vol 1, The United Nations World Water Development Report 4 (Paris: UNESCO, 2012) at 66.

<sup>67</sup> *Guiding Principles on Internal Displacement*, *supra* note 16, ¶2.

<sup>68</sup> *Ibid.*

<sup>69</sup> The stages are as follows: 1) preparedness – being ready for the disaster; 2) early warning – being able to predict a disaster event; 3) reduction of the impact of potential disaster; 4) relief - response actions that reduce the impact of the disaster event after it has happened; 5) recovery -

The coastal regions of South Asia are highly disaster prone. Extreme weather events and natural disasters pose wide-ranging implications for the overall economic development of this region, as each catastrophe destroys years of infrastructural and economic development. When disasters strike the same region again and again, large sections of the population are pushed into a vicious cycle of poverty. This, to a large measure, is what contributes to the underdevelopment and extreme poverty in many parts of South Asia.<sup>70</sup>

To set these aspects in context, the experiences of India and Sri Lanka in dealing with the 2004 Indian Ocean tsunami with regards to relief, rehabilitation and disaster management will be analyzed. Even though tsunami and climate change are not related, the responses to the Indian Ocean tsunami will enable us understand some of the common problems that will confront coastal communities and will also help us appreciate the relevance of the Guiding Principles. This is so since a normative framework has an important role to play in managing and mitigating the impacts of disasters and in ensuring rehabilitation.

On 26 December 2004, a massive earthquake measuring 9.3 on the Richter scale triggered a tsunami in the Indian Ocean.<sup>71</sup> Over the course of the next few hours, the killer waves drowned nearly 300,000 people and devoured coastlines stretching from Indonesia to Somalia.<sup>72</sup> As no alert systems were in place at the time, residents and visitors in coastal communities were not notified of the approaching doom.<sup>73</sup> The worst affected countries were Indonesia, Sri Lanka, the Maldives, India and Thailand. Entire coastal communities were wiped off the map, and in certain areas the tsunami waves

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process of restoring lives, livelihoods and infrastructure to a locally acceptable standard; 6) rehabilitation – dealing with longer-term effects of a disaster and fuller restoration of development. Andrew E Collins, *Disaster and Development* (New York: Routledge, 2009) at 28.

<sup>70</sup> UNDP, A Atiq Rahman, et al, *Human Development Report 2007/2008: Fighting Climate Change: Human Solidarity in a Divided World*, Background Paper on Risks, Vulnerability and Adaptation in Bangladesh (Occasional Paper, Human Development Report Office, 2007) at 12.

<sup>71</sup> See generally US, Foreign Affairs, Defense, and Trade Division, *Indian Ocean Earthquake and Tsunami: Humanitarian Assistance and Relief Operations* (Order Code RL32715) (CRS Report for Congress, 2005).

<sup>72</sup> See generally Hope Lewis, "Human Rights and Natural Disaster The Indian Ocean Tsunami" (2006) 33 Hum Rts 12 (HeinOnline).

<sup>73</sup> See Ambassador L Craig Johnstone, "Planning for the Inevitable, the Humanitarian Consequences of Climate Change" (Remarks by UN Deputy High Commissioner for Refugees), online: UNHCR <<http://www.unhcr.org/49256c492.pdf>>.

reached several kilometers inland.<sup>74</sup> Over 1.7 million were displaced, economic losses were pegged at USD10 billion,<sup>75</sup> water sources were contaminated, and coastal agriculture was destroyed.<sup>76</sup>

Prior to examining the legal implications of this mega-disaster and the responses to it in India and Sri Lanka, it must be noted that disaster management is traditionally based on the fundamental principle that natural disasters are “Acts of God”, and that law cannot hold man responsible for their consequences.<sup>77</sup> This approach poses serious impediments to delineating roles, assigning responsibilities, and ensuring accountability on the part of state authorities. Being acts of God, disasters are not de facto state responsibility; consequently, states cannot be held liable for mismanagement following the event. Disaster management is thus treated as an act of grace by the state and not an entitlement of the citizen.<sup>78</sup> Typically, in the event of a natural disaster, the state announces an ex-gratia payment of a specified amount to the victims, and thereafter the victims are left to fend for themselves while the bureaucracy moves on to deal with the next disaster.<sup>79</sup> There are no mechanisms to ensure that promised payments reach the intended beneficiaries and that they are rehabilitated.<sup>80</sup>

The victims are also confronted with a host of other issues, many of which require a legal remedy. However, unscrupulous lawyers, court delays, incomprehensible procedures and heightened evidentiary requirements conspire against them.<sup>81</sup> Therefore,

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<sup>74</sup> WHO, *From Relief To Recovery: The WHO Tsunami Operations* (WHO: Regional Office for South-East Asia, 2007) at 143 (pointing out that in the Andaman and Nicobar Islands, tidal waves ten meters high moved three kilometers inland).

<sup>75</sup> John Telford, John Cosgrave & Rachel Houghton, *Joint Evaluation of the International Response to the Indian Ocean Tsunami: Synthesis Report* (London: TEC, 2006) at 16-17.

<sup>76</sup> Hari Srinivas & Yuko Nakagawa, "Environmental Implications for Disaster Preparedness: Lessons Learnt from the Indian Ocean Tsunami" (2008) 89 J Envtl Mgmt 4 (ScienceDirect).

<sup>77</sup> The maxim *actus dei nemini facit injuriam* pre-empts state responsibility. Herbert Broom, *A Selection of Legal Maxims Classified and Illustrated* (8th American, from the 5th London ed, 1882) at 229.

<sup>78</sup> National Institute of Disaster Management, *India Disaster Report 2011* (NIDM, 2012) at 14.

<sup>79</sup> *Ibid* at 14-15.

<sup>80</sup> *Ibid*.

<sup>81</sup> Nothing describes this state of affairs more aptly than the Bhopal gas leak disaster, which is one of the worst industrial accidents in human history. Soon after the disaster in 1984, the Union of India enacted the *Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985* (Bhopal Act) assuming the exclusive right to represent and act on behalf of the victims. The Union of India then filed for recovery of damages before the United States District Court, which was dismissed on the ground of *forum non conveniens*. In India, the Bhopal District court ordered the Union Carbide Corporation (UCC) to deposit USD270 million as interim compensation for the victims. Aggrieved

it becomes the duty of the state and the judicial system to reach out to the victims to ensure that they are not denied their rights. The next section will provide an overview of the responses by both India and Sri Lanka to the tsunami, after which the relevance of the Guiding Principles will be explored.

#### A *India and the Tsunami: Relief and Rehabilitation*

The 2004 Indian Ocean tsunami waves mostly hit the southeastern coastline of India, leaving nearly 12,405 dead.<sup>82</sup> A further 647,599 had to be relocated to safer places. The worst affected were the coastal states of Tamil Nadu and the Andaman and Nicobar Islands.<sup>83</sup> It is the response in Tamil Nadu that will be detailed.

In Tamil Nadu, the tsunami claimed 7,995 lives and nearly thirteen districts faced the brunt of this calamity.<sup>84</sup> Once the waves receded, the survivors needed medical assistance; information about missing family members; shelter, food and water; access to new livelihood opportunities; and support to rebuild their lives. The response to the disaster operated at two levels. In the first instance, the executive took action to help the victims. At the second level, assistance came from the judiciary.

The Tamil Nadu state government was totally unprepared for the tsunami.<sup>85</sup> Immediately after the disaster struck, the relief operations were divided into three phases. The first phase centered on search, rescue, evacuation, burial of the dead, and setting up

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by this, the UCC filed a civil revision petition before the Madhya Pradesh High Court, which reduced the interim compensation. The UCC again preferred an appeal before the Supreme Court. During the course of these proceedings, a five-judge Bench headed by the then Chief Justice R.S. Pathak, out of the blue made an order settling the disaster. The UCC was directed to pay USD470 million and all civil proceedings were held as concluded, and criminal proceedings were quashed. The court justified this order on the ground that "to do a great right, it is permissible sometimes to do a little wrong." *Charanlal Sahu v India*, (1989), [1990] 1 SCC 613 (India SC). As far as the disbursement of the compensation amount was concerned, it took more than twenty years to carry out the same, underscoring the injustice heaped on the victims; in most instances the compensation was a case of too little, too late. Marc Galanter, "Legal Torpor: Why So Little Has Happened in India After the Bhopal Tragedy" (1985) 20 *Texas Int'l LJ* 273 (HeinOnline); Daniel Barstow Magraw, "The Bhopal Disaster: Structuring a Solution" (1985) 57 *U Colo L Rev* 835 at 836 (HeinOnline).

<sup>82</sup> *Tiding over Tsunami - Part 1* (Tamil Nadu: India, 2005) at 14.

<sup>83</sup> Number of missing people (5,640); children orphaned (480); houses destroyed (157,393) boats damaged or destroyed (83,788); livestock lost (31,755); agricultural land damaged (39,035 hectares). The total estimated value of damages is USD2.56 billion. *Ibid*.

<sup>84</sup> Nearly 230 villages and 418 kuppams (hamlets), spread across thirteen coastal districts were flattened completely. *Ibid* at 15.

<sup>85</sup> *Ibid* at 23.

relief camps.<sup>86</sup> The second phase focused on providing immediate relief, and the third phase emphasized rehabilitation.<sup>87</sup> With the active support and assistance of the government of India, the United Nations, the World Bank,<sup>88</sup> the Asian Development Bank<sup>89</sup> and several other non-governmental organizations, the Government of Tamil Nadu launched various rehabilitation schemes.<sup>90</sup> The tsunami also significantly affected the fisheries industry. In Tamil Nadu alone, more than 50,000 boats were damaged, as were harbours, jetties, and fish landing sites. In response, the government took measures to provide fishing nets, new boats, etc.<sup>91</sup>

The tsunami victims had to encounter the usual legal difficulties, such as problems relating to guardianship, security of property, succession certificates, bank accounts, encashment of valuable securities, and life insurance claims. Since most of the victims were poor, illiterate and gullible, many were not in a position to press for their rights and access the welfare schemes and programmes initiated by the government and other agencies. This raised a host of logistical problems for the authorities.

Taking their cue from the legal experience following the Bhuj earthquake,<sup>92</sup> the Tamil Nadu State Legal Services Authority alerted the district level authorities to assist

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<sup>86</sup> *Ibid* at 24.

<sup>87</sup> *Ibid*.

<sup>88</sup> The World Bank approved the Emergency Tsunami Reconstruction Project, which was implemented in two phases with objective to repair damaged houses and provide for multi hazard resistant houses. *ETRP Phase I >> About Emergency Tsunami Reconstruction Project*, online: Tsunami Rehabilitation Programme <<http://www.tn.gov.in/tsunami/Projects/ETRPPhase1.html#menu>>.

<sup>89</sup> Tsunami Emergency Assistance Project is a project administered with assistance from the Asian Development Bank with objective to accelerate economic growth and poverty alleviation in the tsunami affected states of Tamil Nadu and Kerala. *TEAP >> About Tsunami Emergency Assistance Project*, online: Tsunami Rehabilitation Programme <<http://www.tn.gov.in/tsunami/Projects/TEAP.html#menu>>.

<sup>90</sup> See generally *Tiding over Tsunami - Part 2* (Tamil Nadu: India, 2008).

<sup>91</sup> Venkatesh Salagrama, *Post-Tsunami Rehabilitation of Fishing Communities and Fisheries Livelihoods in Tamil Nadu, Kerala and Andhra Pradesh* (Revised 12 January 2006), at 6-7, 15-54, online: <[ftp://ftp.fao.org/fi/DOCUMENT/tsunamis\\_05/india/ICSF\\_ICM/ICSFIndiaTsunamiReportRevised12-01-06.pdf](ftp://ftp.fao.org/fi/DOCUMENT/tsunamis_05/india/ICSF_ICM/ICSFIndiaTsunamiReportRevised12-01-06.pdf)>.

<sup>92</sup> An earthquake hit Bhuj in Gujarat state in 2001, there was an outpour of aid. But the government machinery proved incompetent in the aid delivery. A public interest petition namely, *Bipinchandra J Diwan v Gujarat*, (2002) [2002] AIR Guj 99 (Gujarat HC), was filed before the Gujarat High Court. In articulating the duties of the government in disaster management, the court relied on article 21 of the constitution to hold that the state, as the guardian of the people, is obliged to provide assistance and support to the victims and that the right to assistance in calamity is an enforceable one. Furthermore, under the doctrine of *parens patriae*, the state as the parent and guardian of its citizens was to take remedial measures to help and support the victims



the victims. An action plan was formulated and judicial officers and advocates proceeded to inform the victims about their entitlements and legal services. Thousands of applications were received<sup>93</sup> and in granting relief, a liberal approach was adopted and strict rules were relaxed.

Even though the entire focus of the post-tsunami rehabilitation efforts in India was about securing housing and land for the survivors and ensuring livelihood opportunities, even after eight years, the rehabilitation programmes have yet to be concluded.<sup>94</sup> Several gaps in the programmes have reduced their effectiveness, and implementation has been uneven and generally unsatisfactory.<sup>95</sup> Findings indicate that the rehabilitation process is tardy,<sup>96</sup> discriminatory,<sup>97</sup> and inappropriate.<sup>98</sup> Diversion of funds,<sup>99</sup> lack of security of

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of mass disasters. In many ways, *Bipinchandra* represents a marked departure from the earlier position and it practically re-wrote India's antiquated disaster management jurisprudence, where relief and rehabilitation were viewed more or less as an act of grace by the state and not an entitlement of the victim. As well, the decision crafted new roles for the judiciary, particularly, to the lower echelons in dispensing legal services to the victims of mass disasters under the *Legal Services Authorities Act, 1987*. The response to the Gujarat earthquake considerably influenced the manner in which disaster management operations have henceforth been carried out.

<sup>93</sup> For instance Staff Reporter, "Tsunami adalat clears 839 applications from victims", *The Hindu [of India]* (30 April 2005) online: The Hindu <<http://www.hindu.com/2005/04/30/stories/2005043012330300.htm>> (the ninth Tsunami Adalat, conducted in and around Chennai by the Tamil Nadu State Legal Services Authority disposed of 839 applications from tsunami victims).

<sup>94</sup> Special Correspondent, "Deadline for tsunami houses is July 30", *The Hindu [of India]* (22 June 2012) online: The Hindu <<http://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/article3557381.ece?css=print>>; Special Correspondent, "Collector inspects construction of tsunami houses", *The Hindu [of India]* (16 March 2012) online: The Hindu <<http://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/article3000975.ece>>.

<sup>95</sup> But see CV Sankar, "Inaccurate Criticism of Tsunami Relief", *Economic and Political Weekly [of India]* 43:20 (17 May 2008) 94 (JSTOR). "Clinton hails TN for tsunami rehabilitation", *The Times of India* (1 December 2006) online: The Times of India <[http://articles.timesofindia.indiatimes.com/2006-12-01/india/27829236\\_1\\_tsunami-rehabilitation-rehabilitation-work-special-envoy](http://articles.timesofindia.indiatimes.com/2006-12-01/india/27829236_1_tsunami-rehabilitation-rehabilitation-work-special-envoy)>.

<sup>96</sup> For instance, see also *Raju v Tamil Nadu*, [2005], Writ Petition Nos 24063 & 26235 (Madras HC) dated 27-7-2005, online: UNHCR <<http://www.unhcr.org/refworld/pdfid/46b1bbbc2.pdf>> (the petitioner father was a Sri Lankan refugee. His daughter was born in India and was an Indian national. She was swept away by the tsunami waves. In light of bureaucratic apathy in providing relief, it was directed that the concerned government officials consider the compensational claim and dispose of the matter within eight weeks).

<sup>97</sup> Niruj Mohan, et al, "Relief and Rehabilitation: Ensuring Inclusion", *Economic and Political Weekly [of India]* 40:15 (9 April 2005) 1493 (JSTOR) (pointing out to how caste based discrimination excluded dalits from the relief process).

<sup>98</sup> *Salvation Army v A Subbian* (2011), [2011] 11 SCC 619 (India SC) (directing repairs and retrofitting of sub-standard houses built for tsunami victims).

<sup>99</sup> *National Peoples' Tribunal on Post-tsunami Rehabilitation: Housing, Land, Resources and Livelihoods 18 and 19 December 2008, Chennai: Interim Verdict of the Jury*, at 3-4, online: Habitat International Coalition <<http://www.hic-net.org/news.php?pid=2937>> [*National Peoples' Tribunal*].

tenure in respect of the new properties that were handed over to the victims,<sup>100</sup> and loss of livelihood<sup>101</sup> are some of the criticisms leveled. The most stringent critiques came from those who wanted to return to their houses (whether damaged or not) situated within 200 meters from the high tide line.<sup>102</sup> In such cases, they were disentitled to claim compensation from the government.<sup>103</sup> Given SLR, and the strong prospect of intense weather events battering the coastline, the underlying intention in discouraging habitations within 200 meters of high tide line is laudable; however, the government failed to convey the benevolent intent of the restriction to the victims, particularly when there were increasing attempts by private developers to occupy the vacated coastal land.<sup>104</sup>

Prior to the tsunami, India had no law on disaster management and the basic responsibility for rescue, relief and rehabilitation emanated at the concerned state government level.<sup>105</sup> The central government played only a supplemental role by providing state governments with financial and logistic support.<sup>106</sup> One year after the tsunami, in 2005, India enacted its disaster management statute,<sup>107</sup> which represents a paradigm shift in government policy. The primary objective of this law is the creation of

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<sup>100</sup> *Ibid* at 8.

<sup>101</sup> See also *Kranti v India*, [2007], Civil Appeal No 2681 (India SC) dated 16-05-2007 (guidelines issued to deal with the improper utilisation of rehabilitation funds).

<sup>102</sup> The relevant part reads,

all the house owners of fully damaged and partly damaged Kutcha and pucca houses within 200 meters of the High Tide Line, will be given the choice to go beyond 200 meters, and get a newly constructed house worth Rs. 1.50 lakh free of cost. 2. (ii) Those who do not choose to do so will be permitted to undertake the repairs on their own in the existing locations, but they will not be eligible for any assistance from the Government.

*ABSTRACT: Natural Calamities - Tsunami 2004 - Housing Reconstruction Policy announced- Orders issued*, online: Government of Tamil Nadu <<http://www.tn.gov.in/gorders/rev/rev-e-172-2005.htm>>.

<sup>103</sup> *Ibid*.

<sup>104</sup> *National Peoples' Tribunal*, *supra* note 99 at 13.

<sup>105</sup> For instance, see *Gujarat State Disaster Management Act, 2003*, Bihar Disaster Management Bill, 2004 and Jharkhand State Disaster Management Bill, 2005. In the aftermath of the Bhopal gas leak tragedy, the Union Government came up with a series of laws to strengthen the environmental law regime; the most important being the *Environment Protection Act, 1986*.

<sup>106</sup> India, Ministry of Agriculture, Department of Agriculture and Cooperation, *High Powered Committee on Disaster Management: Report* (Gov't of India, September 2001) at 69-70.

<sup>107</sup> *The Disaster Management Act 2005* (No 53 of 2005, India), online: National Institute of Disaster Management <[http://www.nidm.gov.in/DM\\_act2005.pdf](http://www.nidm.gov.in/DM_act2005.pdf)>. Interestingly, the subject of disaster management is not mentioned in the Seventh Schedule to the Constitution. The law can be traced to the residuary powers of legislation conferred upon the Union Government by entry 97 of the Seventh Schedule.

institutional mechanisms obligated to develop disaster management plans and monitor their implementation, and the goal is ensuring measures by various branches of government to prevent and mitigate the effects of disasters and creating a holistic, coordinated and prompt response to disaster situations.

This law provides for the creation of three distinct levels of authorities and their functions: the National Disaster Management Authority,<sup>108</sup> State Disaster Management Authorities,<sup>109</sup> and the District Disaster Management Authority.<sup>110</sup> Furthermore the Central, State Governments and local authorities are to take measures for disaster management.<sup>111</sup> The law also provides that states are not to discriminate between the victims of the disaster on the basis of sex, caste, community, descent or religion.<sup>112</sup>

While India has enacted a law on disaster management, development projects remain one of the primary reasons that fuel displacement in India. Consequently, the issue of rehabilitation is viewed largely from the perspective of project oustees the idea is that the oustees should be in a better position to lead a decent life and earn a livelihood in the rehabilitated premises.<sup>113</sup> Under Indian jurisprudence, rehabilitation is not limited to ensuring food, clothing or shelter; rather, it centers on rebuilding livelihoods by securing access to basic amenities in consonance with human dignity, as enshrined under article 21 of the constitution.<sup>114</sup> Nevertheless, as rehabilitation is viewed from the perspective of project oustees, India has yet to enact legislation to secure the orderly rehabilitation of those displaced by intense storms, earthquakes, tsunamis, SLR and the like.<sup>115</sup> This is a serious flaw that has hampered the development and implementation of a comprehensive response to rehabilitation in the event of climate change related disasters and hazards.

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<sup>108</sup> *Ibid*, s 3.

<sup>109</sup> *Ibid*, s 14.

<sup>110</sup> *Ibid*, s 25.

<sup>111</sup> *Ibid*, ss 35, 38 & 41.

<sup>112</sup> *Ibid*, s 61.

<sup>113</sup> *Narmada Bachao Andolan v India*, (2000) [2000] (10) SCC 664 (India SC). See also The Land Acquisition, Rehabilitation and Resettlement Bill, 2011 (No 77 of 2011, India).

<sup>114</sup> *ND Jayal v India* (2003), [2004] 9 SCC 362 (India SC).

<sup>115</sup> Interestingly a private members Bill entitled The Persons Living in Coastal Zone (Rehabilitation And Welfare) Bill, 2011 was introduced which seeks to set up an Authority for rehabilitation and welfare of persons living in coastal zone. Another private member bill is the *Citizens Affected by Cyclone, Super Cyclone or Tsunami in Coastal areas (Compensation, Rehabilitation and Welfare) Act, 2007*.

## B Sri Lanka and the Tsunami: Relief and Rehabilitation

The 2004 Indian Ocean tsunami was one of the worst natural disasters ever to strike Sri Lanka, damaging nearly two-thirds of its coastline, claiming 35,322 lives, and displacing 853,025 persons.<sup>116</sup> The total loss in assets was about USD1 billion or nearly five per cent of the country's GDP.<sup>117</sup> Like India, Sri Lanka was totally unprepared to deal with the fallout from this disaster; the situation was further compounded by ongoing internal strife. Prior to the tsunami, attempts to enact a disaster management statute fell through, and therefore the legal system was inadequate to address relief, rehabilitation and displacement issues.

In countering these endemic shortfalls, the *Tsunami (Special Provisions) Act, 2005*<sup>118</sup> laid out a legal framework to protect persons and property affected by the tsunami and to overcome existing legal obstacles.<sup>119</sup> For instance, the law prescribes special provisions for the issuance of death certificates in case of persons missing attributable to the tsunami, and tenancy or leasehold rights were not terminated merely because the subject matter of the tenancy or the lease was destroyed or made unsuitable by the tsunami.<sup>120</sup> Furthermore, given the high possibility of thefts and abuse of tsunami relief property, Sri Lanka enacted a specific legislation for resettlement – the *Resettlement Authority Act, 2007*<sup>121</sup> — whose primary objective was to implement a national resettlement policy to plan, monitor and co-ordinate resettlement “in a safe and dignified manner” of internally displaced persons and refugees.<sup>122</sup>

The post-tsunami rehabilitation in Sri Lanka is similar to the one in India and was characterized by poor housing, tardiness, misappropriation of funds, prohibition on reconstruction near to the seashore, bureaucratic apathy, inappropriate choice of rehabilitation sites, lack of basic amenities, and increasing destitution of already

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<sup>116</sup> International Federation of Red Cross and Red Crescent Societies, *Legal Issues from the International Response to the Tsunami in Sri Lanka: An International Disaster Response Laws, Rules and Principles (IDRL) Programme Case Study*, by Victoria Bannon (Thailand: International Federation of Red Cross and Red Crescent Societies, 2006) at 4.

<sup>117</sup> Shamalie Gunawardana, “Legal and Governance Issues of the Tsunami Disaster – The Sri Lankan Experience” in C Raj Kumar & DK Srivastava, eds, *Tsunami and Disaster Management: Law and Governance* (Hong Kong: Sweet & Maxwell Asia, 2006) 227 at 228.

<sup>118</sup> No 16 of 2005, Sri Lanka.

<sup>119</sup> *Ibid*, pmb.

<sup>120</sup> *Ibid*, s 31.

<sup>121</sup> *Resettlement Authority Act, 2007* (No 9 of 2007, Sri Lanka).

<sup>122</sup> *Ibid*, pmb. See also s 13(a).

impoverished communities.<sup>123</sup> More serious were the allegations that certain affected groups, such as the Tamils, were discriminated against in aid distribution.<sup>124</sup> It is against this backdrop of the tsunami impact on India and Sri Lanka that the significance of the Guiding Principles must be examined.

### C *The UN Guiding Principles on Internal Displacement, 1998*

Francis M. Deng, a former Representative of the Secretary-General on Internally Displaced Persons, was appointed in 1992 by the United Nations Commission on Human Rights to prepare a framework for the internally displaced, which was finalized in 1998.<sup>125</sup> The Guiding Principles on Internal Displacement is “a normative framework” that provides guidance to states<sup>126</sup> on all aspects of internal displacement.<sup>127</sup> It addresses “the specific needs of internally displaced persons worldwide by identifying rights and guarantees relevant to their protection”<sup>128</sup>, from the time of “forced displacement”, “during displacement”, and during their return, resettlement, and reintegration.<sup>129</sup> The central tenet of the Principles is non-discrimination.<sup>130</sup> Moreover, it provides that evacuation must be resorted to only to protect safety and the health of those who are affected,<sup>131</sup> and it should not be for periods longer than what is required by circumstances.<sup>132</sup> The displacement is not to be carried out in a manner that violates the rights to life, liberty, dignity and security.<sup>133</sup> During displacement, people are entitled to the following rights: the right to life protected by law,<sup>134</sup> the right to be recognized as a

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<sup>123</sup> See generally Muttukrishna Sarvananthan, "Post Tsunami Sri Lanka: Swindlers Hold Sway", *Economic and Political Weekly [of India]* 40:17 (23 April 2005) 1683 (JSTOR) (pointing out to the corruption that was rampant in the distribution of aid in the North and in the East of the country).

<sup>124</sup> Many believe that the judiciary was also sucked into the political morass that surrounded the rehabilitation efforts. See for instance, Sanjoy Majumder, " Sri Lanka's tsunami aid politics", *BBC News* (21 March 2005) online: BBC News <[http://news.bbc.co.uk/2/hi/south\\_asia/4367935.stm](http://news.bbc.co.uk/2/hi/south_asia/4367935.stm)>.

<sup>125</sup> See generally Francis Mading Deng, "The Global Challenge of Internal Displacement" (2001) 5 *Wash UJL & Pol'y* 141 (QL).

<sup>126</sup> *Guiding Principles on Internal Displacement*, *supra* note 16 at 5, ¶3(b).

<sup>127</sup> *Ibid* at 2, ¶5.

<sup>128</sup> *Ibid* at 3, ¶9.

<sup>129</sup> *Ibid* at 5, ¶1.

<sup>130</sup> See *ibid*, prins 1, 4 & 22.

<sup>131</sup> *Ibid*, prin 6.2(d).

<sup>132</sup> *Ibid*, prin 6.3.

<sup>133</sup> *Ibid*, prin 8.

<sup>134</sup> *Ibid*, prin 10.

person under law,<sup>135</sup> the right to dignity, and the right to physical, mental and moral integrity.<sup>136</sup> In addition, internally displaced persons (IDPs) are entitled to the right to liberty and security of person,<sup>137</sup> liberty of movement, and the freedom to choose residence.<sup>138</sup> IDP's are also guaranteed the right to know the whereabouts of missing relatives<sup>139</sup> and the right to be reunited as quickly as possible with family members.<sup>140</sup> In addition, IDPs have the right to an adequate standard of living, access to food and potable water, basic shelter and housing, appropriate clothing, essential medical services and sanitation,<sup>141</sup> and education.<sup>142</sup>

Regarding humanitarian assistance,<sup>143</sup> the Principles state that the “primary duty and responsibility” of delivering humanitarian assistance lies with national authorities<sup>144</sup> and it must be carried out in accordance with the principles of humanity, impartiality and non-discrimination.<sup>145</sup> Diversion of humanitarian assistance is prohibited and international humanitarian organizations and other appropriate actors have the right to offer their services to support IDPs, an offer that is not to be construed as an act of interference with the state’s internal affairs.<sup>146</sup>

The Guiding Principles also recognize the right of the IDP to return, resettle and reintegrate.<sup>147</sup> Accordingly, competent authorities have the primary duty and responsibility to establish conditions and means to allow IDPs to return to their places of habitual residence or to resettle voluntarily in another part of the country.<sup>148</sup> In planning their return and resettlement, special efforts should be made to ensure the full

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<sup>135</sup> *Ibid*, prin 20.

<sup>136</sup> *Ibid*, prin 11.

<sup>137</sup> *Ibid*, prin 12.

<sup>138</sup> *Ibid*, prin 14. See also *ibid*, prin 15 (guaranteeing IDPs the right to leave their country, to seek asylum in another and the right to be protected against forcible return in cases where life, liberty, safety and health is at risk).

<sup>139</sup> *Ibid*, prin 16.

<sup>140</sup> *Ibid*, prin 17.

<sup>141</sup> *Ibid*, prins 18, 19 (where necessary the IDPs should be provided with psychological and social services. In addition, the health needs of women should also be taken into account).

<sup>142</sup> *Ibid*, prin 23 (the education should respect their cultural identity, language and religion).

<sup>143</sup> *Ibid*, s IV.

<sup>144</sup> *Ibid*, prin 25 .1.

<sup>145</sup> *Ibid*, prin 24. 1.

<sup>146</sup> *Ibid*, prin 25. 2.

<sup>147</sup> *Ibid*, s V.

<sup>148</sup> *Ibid*, prin 28.

participation of IDPs.<sup>149</sup> Once they have returned or have been resettled, IDPs have the right to participate “fully and equally” in public affairs and have equal access to public services.<sup>150</sup> Competent authorities should assist the IDPs recover properties and possessions, which they were dispossessed of during their displacement, and in cases where recovery is not possible, assistance should be provided to enable them recover appropriate compensation.<sup>151</sup>

As seen, India and Sri Lanka’s responses to the tsunami were short-sighted, limited, dilatory, and discriminatory. Yet it is within the context of such experiences that the Guiding Principles assume relevance. Even though non-binding and voluntary, the framework represents an important step in securing protection to the internally displaced. By identifying the specific needs of IDPs and articulating their rights, the Principles are “consistent with international human rights law and international humanitarian law”,<sup>152</sup> which most states have subscribed to.<sup>153</sup> In addition, the Guiding Principles do not restrict, modify or impair “the provisions of any international human rights or international humanitarian law instrument or rights granted to persons under domestic law.”<sup>154</sup> In sum, the framework is a valuable springboard to launch the development of legal norms and principles to protect those displaced by climate change and SLR.<sup>155</sup>

#### D *Lessons Learned*

Given the fact that India and Sri Lanka were totally unprepared to respond to the tsunami and are yet to conclude the relief and rehabilitation programmes, it is doubtful as to how the South Asian countries with poor institutional mechanisms will be able to respond to climate change and SLR impacts. As well, the above discussion holds six useful lessons

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<sup>149</sup> *Ibid*, prin 28.2.

<sup>150</sup> *Ibid*, prin 29.

<sup>151</sup> *Ibid*.

<sup>152</sup> *Ibid*, ¶9.

<sup>153</sup> Many of the principles enshrined in the Guiding principles are recognized in India’s constitutional jurisprudence. The position in Sri Lanka is also identical.

<sup>154</sup> *Guiding Principles on Internal Displacement*, *supra* note 16, prin 2.

<sup>155</sup> The Nansen Principle VIII calls upon states to encourage the implementation and operationalization of the Guiding Principles on Internal Displacement principles through national legislation, policies and institutions. See *The Nansen Conference*, *supra* note 61 at 5. See also UNGA, Draft Resolution Referred to the High-level Plenary Meeting of the General Assembly by the General Assembly at its Fifty-Ninth Session: 2005 World Summit Outcome, A/60/L.1 (15 September 2005) ¶132.

that are pertinent for internally displaced persons, more particularly, in the event of SLR and climate change. First and foremost is the need to streamline existing sectoral efforts for coastal management and target a more holistic and effective coastal zone management. Over the years, inept coastal management has resulted in the placement of coastal communities in harm's way, leading to loss of life whenever an intense weather event or natural disaster strikes. Moreover, destruction of mangroves, in-filling of coastal wetlands, and other alterations of shorelines all amplify the magnitude of the disasters.<sup>156</sup> Through effective coastal management, grounded on a precautionary-based adaptive approach, losses can be considerably reduced.

Secondly, relief and rehabilitation are rights of the displaced, not the grace of the state. A necessary corollary is that victims have the rights to life<sup>157</sup> and dignity, including the right not to be discriminated against, and these rights are to be respected at all times.

The third lesson that emerges is the re-emphasis on the need for a disaster management framework for coastal areas that operate within the broader framework for coastal management.<sup>158</sup> The framework should provide necessary systems, programs, resources and capabilities for reducing risks, advance preparation, and responding to disasters in a timely manner. This will help save lives and property, avoid disruption of economic activity, and mitigate damage to the environment.

Fourthly, the importance and necessity of developing a specific framework for rehabilitation of local communities at the respective national level in the event of sudden weather events, disasters, SLR and other climatic changes is underscored. The primary objective of this framework, modeled on the Guiding Principles, should be the timely restoration of normalcy, and the aim should be that victims are better off in the relocated

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<sup>156</sup> "Waves of Fury", *Economic and Political Weekly [of India]* 40:1 (1 January 2005) 3 (JSTOR) (pointing out that the norms relating to coastal management were flouted, mangroves and reef areas have been systematically demolished, all contributing to the magnitude of the disaster).

<sup>157</sup> See *Budayeva v Russia*, 15339/02, [2008] ECHR, online: Human Rights Law Centre <<http://www.hrlrc.org.au/files/9CRYLUXROM/Budayeva%20v%20Russia.pdf>>. By not establishing observation posts to warn civilians about the threat of an impending mudslide it was held by the European Court of Human Rights that the Russian Federation violated its positive obligation to protect the right to life under art 2 of the European Convention on Human Rights. *Ibid.*

<sup>158</sup> International Strategy for Disaster Reduction, *World Conference on Disaster Reduction 18-22 January 2005, Kobe, Hyogo, Japan, Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* at 1, online: UNISDR <<http://www.unisdr.org/2005/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf>>. "[E]fforts to reduce disaster risks must be systematically integrated into policies, plans and programmes for sustainable development and poverty reduction". *Ibid.*



regions.

The fifth lesson that emerges is that there must be no discrimination between the victims in matters relating to aid distribution and support.<sup>159</sup> In particular, the needs of children, the aged, the disabled and other marginalized groups should have priority, as these are the people who suffer the most from natural and other disasters due to their limited adaptive capacities.

The sixth lesson is that community involvement is paramount in designing and implementing rehabilitation measures. Thus, there is a need to utilize local knowledge. Any attempt at rehabilitation that is divorced from community needs and aspirations is bound to fail. On this basis, the next part examines the legal implications when communities cross international borders for refuge.

#### IV PROTECTING THOSE DISPLACED BY CLIMATE CHANGE WHO HAVE CROSSED INTERNATIONAL BORDERS

The starting point of this analysis is whether the Refugee Convention, which is the international legal regime on refugees, is applicable to people displaced by climate change and who have crossed international borders.

Coming as it did on the heels of the Universal Declaration on Human Rights, 1948, the Refugee Convention of 1951 is the sole binding human rights instrument that affords protection to refugees. The starting point depends on who qualifies for refugee status. “[A] term of art in international law”,<sup>160</sup> a ‘refugee’ has been defined under the 1951 Refugee Convention as someone who,

owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear, 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

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<sup>159</sup> See also *The Nansen Conference*, *supra* note 61 at 5, prinl X (stating that “[n]ational and international policies and responses, including planned relocation, need to be implemented on the basis of non-discrimination, consent, empowerment, participation and partnerships with those directly affected, with due sensitivity to age, gender and diversity aspects”).

<sup>160</sup> UNHCR, *UNHCR and Climate Change: Involvement, Challenges & Response*, online: UNHCR <<http://www.unhcr.org/4ad5820f9.pdf>>.

result of such events, is unable or, owing to such fear, is unwilling to return to it.<sup>161</sup>

If a person meets the specifics of this definition, then the Refugee Convention, 1951 applies and the refugee immediately receives extensive legal protection, including the right not to be forcibly repatriated to his or her home state.<sup>162</sup> Therefore, it is necessary to examine whether those who are displaced by climate-change-related phenomena and who have crossed international borders into another state can claim refugee status.<sup>163</sup>

The first element in this definition is persecution. Proving persecution in the context of climate change impacts like SLR requires more than legal ingenuity and interpretative skills, for it is practically impossible to treat climate change impacts as persecution, let alone persecution on the grounds of race,<sup>164</sup> religion,<sup>165</sup> nationality, membership of a particular social group,<sup>166</sup> or political opinion<sup>167</sup>. Secondly, it is also not possible to exactly pinpoint a persecutor. The governments of the island states of the Maldives, Kiribati, or Tuvalu are not persecutors in the sense that they are not the ones responsible for climate change or SLR, as their carbon footprint is negligible. It could be argued that since industrialized countries are the primary emitters of GHG emissions that have precipitated the present problem, these countries are the persecutors. But then the irony is that, rather than fleeing from the alleged persecutor, the inhabitants of most of these countries are seeking shelter with the persecutor.<sup>168</sup> In other words, the new

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<sup>161</sup> *Convention relating to the Status of Refugees*, 28 July 1951, 189 UNTS 150 (entered into force 22 April 1954) art 1(A)(2).

<sup>162</sup> *Ibid*, art 33(1).

<sup>163</sup> For an overview of refugee jurisprudence under Canadian law, see notes 164-67.

<sup>164</sup> *Singh v Canada (Minister of Citizenship and Immigration)*, 2007 FC 1296, 68 Imm LR (3d) 131 (holding that there was failure on the part of the Board to consider evidence, which established nexus between violent incidents and grounds of race and ethnicity).

<sup>165</sup> *Yang v Canada (Minister of Citizenship and Immigration)*, 2001 FCJ 1463 (TD) (in determining whether Falun Gong is religion or not it should be approached from the point of view of the persecutor (the Government of China). Since the government dealt with the Falun Gong under the Bureau of Religious Affairs, it was considered as religion).

<sup>166</sup> *Cheung v Canada (Minister of Employment and Immigration)*, (1993) 2 FC 314 (CA) (women in China who have more than one child and are faced with forced sterilization and they share a founded fear of persecution and so they form a particular social group). See also *TZU (Re)*, (2002) RPDD 174.

<sup>167</sup> Membership of a social group like the village cooperative which resisted military action to occupy farmlands cannot be considered as relating to political opinion. See *Barima v Canada (Minister of Employment and Immigration)*, (1994) 1 FC 30 (TD); *Canada (Attorney General) v Ward*, [1993] SCJ 74.

<sup>168</sup> Jane McAdam, *Climate Change Displacement and International Law Climate Change Displacement and International Law: Side Event to the High Commissioner's Dialogue on Protection Challenges*, 8

dynamic practically turns the refugee regime on its head. In sum, a prima facie analysis of this definition leads us to the conclusion that those displaced by climate change and who have crossed international borders are disqualified from claiming the benefits guaranteed under the Refugee Convention and its Protocol of 1967.<sup>169</sup>

Drafted primarily in response to the plight of those left homeless because of World War II, “persecution or a belief in such persecution by a person’s own government” is the grund norm of the 1951 Convention that determines refugee status.<sup>170</sup> With time, however, a fundamental shift occurred in the originally contemplated circumstances, as the majority of people who now flee their home countries do so for reasons other than government persecution.<sup>171</sup>

The element of persecution implicit in the definition effectively precludes large segments of disadvantaged communities from seeking refuge under this instrument. Moreover, academic opinion does not view the Refugee Convention as being applicable to climate refugees.<sup>172</sup> The question then is: what can be done to protect the rights of these people?

Debate currently rages in international law circles regarding whether people fleeing climate-change-related impacts should be granted refugee protection. One way to circumvent the definitional quagmire is, by amendment, to include climate-change-displaced people who have crossed international borders.<sup>173</sup> Those who support this proposition argue that since both ‘normal’ and climate-change-related refugees represent

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*December 2010, Palais des Nations, Geneva*, online: UNHCR <<http://www.unhcr.org/4d05ecf49.pdf>>.

<sup>169</sup> *Ibid* (discussing case law in Australia and New Zealand where the residents of Tuvalu and Kiribati unsuccessfully argued that they ought to receive refugee protection from climate change impacts).

<sup>170</sup> Duong, *supra* note 56.

<sup>171</sup> Bonnie Docherty & Tyler Giannini, “Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees” (2009) 33 Harv Envtl L Rev 349 (QL).

<sup>172</sup> For instance, see Duong, *supra* note 56.

<sup>173</sup> The Minister Abul Maal Abdul Muhith in an interview states

[t]wenty million people could be displaced [in Bangladesh] by the middle of the century, ... We are asking all our development partners to honour the natural right of persons to migrate. We can't accommodate all these people – this is already the densest [populated] country in the world....The convention on refugees could be revised to protect people. It's been through other revisions, so this should be possible.

“UK should open borders to climate refugees, says Bangladeshi minister”, *TheGuardian* (4 December 2009) internet video: theguardian, online: theguardian <<http://www.guardian.co.uk/environment/2009/nov/30/rich-west-climate-change>>.

involuntary migrants who are unable to return to their homeland, they are both equally entitled to protection under international refugee law. On the other hand, those who oppose the extension of the regime argue that, unlike victims of persecution, those fleeing climate-change impacts can, in most circumstances, rely on their own national government for help and support. Conflating the term 'refugee' to include both traditional refugees and persons displaced by climate change will actually be grossly disproportionate at several levels, as it will obfuscate the fundamental differences between the problems faced and support expected by the two groups.<sup>174</sup> Moreover, expanding the definition of refugee may lead to a dilution of rights and protections guaranteed to those who qualify for protection under the Refugee Convention.<sup>175</sup> Already, national governments have been trying to limit the mass refugee influxes as they find that their resources are being stretched to the limit. Refugees are becoming unwelcome in many countries.

In the South Asian region, the problem acquires more serious dimensions. For instance, given the high probability that the rising seas will swallow the archipelago of the Maldives,<sup>176</sup> it is generally believed that those displaced by climate change will seek shelter within the South Asian region due to cultural affinities, with India<sup>177</sup> and Sri Lanka emerging as preferred destinations.<sup>178</sup> Interestingly, none of the South Asian coastal countries have signed the 1951 Refugee Convention and its related protocol, nor do they have any concrete legal standards or norms at the respective national level for refugee protection.<sup>179</sup> Thus, it can be concluded that climate-change-displaced persons

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<sup>174</sup> David Hodgkinson et al, '*The Hour When the Ship Comes In*': A Convention for Persons Displaced by Climate Change, at 8, online: A Convention For Persons Displaced By Climate Change <<http://www.ccdpconvention.com/documents/Hodgkinson%20et%20al%20MULR%20journal%20article.pdf>>.

<sup>175</sup> UNHCR, *Submission: Forced Displacement in the Context of Climate Change: Challenges for States under International Law* (20 May 2009) at 10.

<sup>176</sup> UNDP, *Human Development Report 2009: Overcoming Barriers: Human Mobility and Development* (New York: Oxford University Press, 2009) at 45.

<sup>177</sup> See Prabodh Saxena, "Creating Legal Space for Refugees in India: The Milestones Crossed and the Roadmap for the Future" (2007) 19:2 Int'l J Refugee L 246 at 247-48.

<sup>178</sup> Kälin & Schrepfer, *supra* note 10 at 18.

<sup>179</sup> Even though the inflow of refugees into India began the partition of this country, India is not as yet a party to the 1951 Convention or the 1967 Protocol. As well, India has not legislated on this subject. Therefore, protection to refugees flows primarily from constitutional mandates, and on liberal judicial interpretations. *Chairman, Railway Board v Chandrima Das*, (2000) [2000] (2) SCC 465 (India SC) (a Bangladeshi national, gang raped by railway employees in an Indian Railways

who cross international borders are in a state of suspended animation vis-à-vis their legal status. Furthermore, since none of the South Asian countries are parties to the Refugee Convention, it is possible that climate-change-induced migrants who end up there may be subjected to severe human rights abuses, unless legal arrangements are put in place to secure their basic rights.

## V THE WAY FORWARD: INTERNATIONAL TREATY v. ADAPTATION BASED APPROACH

SLR is an issue of widespread concern amongst coastal states. Already, significant SLR has taken place and will likely accelerate in the near future.<sup>180</sup> Even though the international climate change regime has entered into a second commitment period<sup>181</sup> it is doubtful whether the regime will be able to turn down the heat unless and until drastic steps are taken.<sup>182</sup> Consequently, the amount of greenhouse gases being pumped into the atmosphere continues to grow at alarming levels.<sup>183</sup> The potential for rapid changes in the earth's environment is extremely high and will trigger far-reaching changes. Climate change impacts raise a myriad of complex legal issues that touch upon aspects like maritime boundaries, refugee rights, statelessness, and protection of coastal biodiversity. Since the attention of the international community has thus far focused on climate change mitigation, the humanitarian and environmental dimensions were of less concern. Nevertheless, the fact remains that even if we are successful in stabilizing GHG emissions, sea levels will continue to rise for decades, since tipping points have already

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building is entitled to compensation under article 21). *Ktaer Abbas Habib Al Qutaifi v India*, (1998) [1998] INDLAW Guj 69 (Gujarat HC) (the principle of non-refoulement is encompassed in article 21). *Arunachal Pradesh v Khudiram Chakma*, (1994) [1994] Sup (1) SCC 615 (India SC) (directing the state of Arunachal Pradesh to ensure that the life and personal liberty of Chakmas be protected).

<sup>180</sup> See Part II-A, above, for more discussion on SLR.

<sup>181</sup> But see generally UNFCCC, *Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol Draft Decision Proposed by the President Draft Decision -/CMP.8: Amendment to the Kyoto Protocol Pursuant to its Article 3, Paragraph 9*, FCCC/KP/CMP/2012/L.9 (8 December 2012).

<sup>182</sup> See generally Potsdam Institute for Climate Impact Research and Climate Analytics, The World Bank, *Turn Down the Heat: Why a 4°C Warmer World Must be Avoided* (Washington DC: The World Bank, 2012).

<sup>183</sup> As at December 2012, CO<sub>2</sub> concentrations stands at 394.39 parts per million (measured at the Mauna Loa Observatory in Hawaii, USA) *Earth's CO2 Home Page*, online: CO2 Now <<http://co2now.org/>>.

been crossed and it takes some time for the oceans to equilibrate to the rising atmospheric temperatures.<sup>184</sup>

A primary reason as to why these issues were not being addressed at an international platform is because of the uncertainty and complexities associated with climate change impacts and SLR.<sup>185</sup> Even though there is incontrovertible scientific evidence affirming climate change, due to the lack of visible propinquity in terms of predicted impacts, it may be infeasible to publicly admit that mitigative steps alone will not resolve the problems. Moreover, an ‘official’ admission of the disastrous consequences that may await us could trigger climate change alarmism, leading to anarchical situations, mass migrations, derailed development and impeded economic growth. Second, even if it is acknowledged that we have crossed the tipping points and that climate change and its consequences are irreversible, it is extremely difficult to predict what the actual effects will be, where exactly they will occur, and what the time scale is.

The conjecture that emerges is that there is a normative vacuum in terms of legal principles and avenues that impose explicit obligations to tackle the full range of issues brought to the fore by climate change related displacement. It is apparent that since those who cross international borders to flee from their sinking homes do not fall within the ambit of the traditional legal framework on refugee protection, their legal status remains in limbo.<sup>186</sup> This mass exodus of people will pose entirely new challenges in terms of legal, humanitarian and national sovereignty issues. Even more worrying is the fact that we do not have an appropriate and internationally agreed upon terminology to describe them, as the term climate-change refugee is seen as a misnomer.<sup>187</sup> This situation persists even though, in a matter of decades, vast swathes of coastal regions may be inundated by seawater and entire nations displaced. Therefore, the question is whether we should explore the possibility of developing an exclusive new treaty to protect climate-displaced persons or in the alternative should we invest on climate change adaptation, and in this

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<sup>184</sup> “Summary for Policymakers” in *Physical Science*, *supra* note 54 at 16.

<sup>185</sup> See Duong, *supra* note 56 at 1244 (pointing out that the United States has cited scientific uncertainty as a ground for non-participation in the Kyoto Protocol).

<sup>186</sup> See generally Part IV, above.

<sup>187</sup> See Part II-B, above, for a discussion on terminology and related classifications regarding climate displaced.

context on Integrated Coastal Zone Management (ICZM). These aspects are discussed below.

Presently, as it stands the international instruments that provide a semblance of protection to the rights of the climate change displaced are caught in a time warp and have not developed according to rapidly changing societal needs and the changing environmental landscape. Therefore, we can assert with some confidence that international law has not matured in terms of normative development to provide states guidance on how to deal with the legal consequences of extreme climate change impacts.<sup>188</sup> That said, the national responses also fall short.<sup>189</sup> Ultimately, the challenges posed by SLR and climate change are sui generis in nature, and these test our fundamental legal assumptions. Consequently, there is a discernable demand for unique legal responses. However, this is easier said than done.

As an adjunct to state sovereignty and to protect national interests, states have power to exclude aliens, restrict citizenship, and accept immigrants upon certain terms.<sup>190</sup> In an age where natural resources are getting scarcer and competition to gain control over economic resources is becoming more intense, will countries be open to accepting climate-change-displaced populations?<sup>191</sup> It is also expected that climate change and SLR will lead to massive internal displacement of a country's own citizens.<sup>192</sup> In such circumstances, it may be grossly unfair to expect that such countries accept additional immigrants. At the same time, there may be countries that are in a position to accommodate additional people, but there may be constraints on the numbers that they can feasibly accommodate. Furthermore, migration across international borders is no easy task as the displaced populations can face uncertain conditions in new areas, which can be highly disruptive of their lives, and the host populations may be less than accommodating. As well, it should also be noted that the actual victims of climate-

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<sup>188</sup> See Parts III and IV, above, for a discussion on the gaps in international law in dealing with climate displaced.

<sup>189</sup> See Part III-A and B, above, for inadequacies in national level responses.

<sup>190</sup> But see *Convention Relating to the Status of Refugees*, 28 July 1951, 189 UNTS 150 (entered into force 22 April 1954) art 31(1), arts 32, 33.

<sup>191</sup> See L Craig Johnstone, "The Climate Change Future is Now" (Address by UN Deputy High Commissioner for Refugees at the Institute of Public Policy Research Conference Climate Change and Forced Migration, 29 April 2008), online: UNHCR <<http://www.unhcr.org/4901e8e82.pdf>>.

<sup>192</sup> Rajan, *supra* note 13.

induced disasters might not be the ones who migrate. In many instances, those who flee will be the highly educated, technically skilled, economically well-off citizens because they find living in their countries extremely difficult.<sup>193</sup> This brain drain will prove detrimental to these countries through the loss of effective leaders.<sup>194</sup>

As mentioned in the introduction, climate change induced migration is largely a developing country issue. Generally, poor governance, largescale environmental degradation, poverty, and unemployment characterize such societies. And here climate change related hazards and SLR act as the final factor triggering the displacement.<sup>195</sup> Accordingly, there is high possibility that inept national governments, rather than fulfilling their obligations towards their citizens may use an extreme weather event or SLR as a ruse to shoo their impoverished populace across a border.

In addition, there are other pragmatic difficulties in securing agreement on the specific elements of an international hard law instrument on the subject, the tortuous nature and time periods involved in most treaty negotiations, the issue of ratification and coming into force of the treaty – all render an international agreement on the subject a difficult prospect.<sup>196</sup> Moreover, an international hard law instrument is only the first step, the second deals with the more profound implementation aspect. A treaty is not a magic wand that can set things right. We have countless number of treaties based on strong legal

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<sup>193</sup> For example, Bangalore, the Silicon Valley of India gets only 900 million liters of water per day (MLD) as against the demand for 1,125 MLD. "Water crisis to worsen in City", *Deccan Herald [of India]* (11 March 2012) online: Deccan Herald <<http://www.deccanherald.com/content/57638/ipl-2012.html>>.

<sup>194</sup> McAdam, "Swimming", *supra* note 63 at 23.

<sup>195</sup> See generally Binod Khadria, *Skilled Labour Migration from Developing Countries: Study on India* (International Migration Papers, 49, Geneva, ILO).

<sup>196</sup> For instance, the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009* was adopted in 2009 to coincide with the glut in the number of single hull oil tankers that would be available for recycling by 2010. Accordingly, the convention was to enter into force 24 months after the date on which 15 States, representing 40 per cent of world merchant shipping by gross tonnage, would have ratified it. See International Conference on the Safe and Environmentally Sound Recycling of Ships: Agenda Item 8, Adoption of the Final Act and Any Instruments, Recommendations and Resolutions Resulting from the Work of the Conference: Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, Text Adopted by the Conference, IMO/SR/CONF/45, 19 May 2009 (opened for signature 1 September 2009) art 17, online: European Commission <<http://ec.europa.eu/environment/waste/ships/pdf/Convention.pdf>>. This convention is yet to enter into force due to insufficient ratifications. See *Recycling of Ships: The Development of the Hong Kong Convention*, online: IMO <<http://www.imo.org/ourwork/environment/shiprecycling/pages/Default.aspx>>.



principles and norms,<sup>197</sup> but since implementation is for the most part a matter left to the domestic domain, it is often found waning.<sup>198</sup> In many areas, the problem is not about the absence of international hard law; rather feet dragging by nations due to the lack of will to implement treaty obligations because of socio-economic and political compulsions has practically rendered many treaties dead letters.<sup>199</sup> Definitely an international instrument on the subject can accrue legal benefits to the climate-change-displaced. However, if the instrument facilitates transboundary movements, then it is obvious that it will meet a dismal fate, as it is apparent that no nation will want to accommodate oceans of people. Mainly because of these challenges, the call for a new international treaty to protect the rights of those displaced by climate change has not been successful thus far, as there is fear that such a treaty will be insufficiently ratified and half-heartedly implemented.<sup>200</sup> As mentioned earlier, there can be two categorisations of coastal nations and communities that will be impacted by SLR and climate change. In the case of SIDS that has no additional land, the prospect of sinking is real and therefore it may become necessary to protect the rights of these coastal communities.<sup>201</sup> However, displacement can be highly disruptive of their lives and as their welfare is closely intertwined with the resources, ecosystems goods and services available in that particular region, they may not want to move out to distant lands.<sup>202</sup> Moreover their socio-economic conditions, language and cultural factors can also discourage them from undertaking cross-border migrations

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<sup>197</sup> For instance, in the area of International Environmental Law, as at December 2005, there were 272 international treaties (including amendments). See generally UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment*, UNEP/Env.Law/2005/3 (Nairobi: UNEP, 2005).

<sup>198</sup> David S Ardia, "Does the Emperor Have No Clothes? Enforcement of International Laws Protecting the Marine Environment" (1998) 19 Mich J Int'l L 497 at 508-10.

<sup>199</sup> Even though the doctrine of *pacta sunt servanda* (art. 26 of the *Vienna Convention on the Law of Treaties, 1969*) implies that states must obey their international commitments in good faith, which may require certain compromises on their sovereignty, the fact is that the number of unenforced international environmental agreements continues to grow. *Ibid.*

<sup>200</sup> McAdam, "Swimming", *supra* note 63 at 2.

<sup>201</sup> *UNHCR Climate Change, Natural Disasters*, *supra* note 48 at 5. See also Jane McAdam, "'Disappearing States', Statelessness and the Boundaries of International Law" in Jane McAdam, ed, *Climate Change and Displacement: Multidisciplinary Perspectives* (Oxford and Portland, Oregon: Hart Publishing, 2010) 105 at 118 [McAdam, "Disappearing States"] (noting that the legal status is rather unclear). See *Submission: Climate Change and Statelessness*, *supra* note 12 at 2 (noting that should statehood cease, the population will be rendered stateless).

<sup>202</sup> For example, tourism contributes over a third of the GDP in the Maldives. Similarly, fishing provides employment to nearly 15 per cent of the population. Maldives, Ministry of Environment and Energy, *State of the Environment 2011* (2011) 47, 49.

to distant lands. To retain statehood and control over their maritime spaces, it may be necessary for these states and for their displaced populations to exercise some sort of physical control over whatever landmass that stays above water.<sup>203</sup> While there are several instances of countries exercising control over their dominions situated hundreds and thousands of miles away, closer physical access can enable better monitoring and continued utilization of maritime resources.<sup>204</sup> As pointed out earlier, social, cultural factors may also influence the decision of these coastal communities not to move out of a particular region. Accordingly, there may be amplitude for regional or bilateral treaties to address particular facets to the problem. For instance, given the acute vulnerabilities faced by the Maldives in South Asia, and the recent attempts by this country to purchase land in neighbouring India or Sri Lanka,<sup>205</sup> the South Asian Association for Regional Cooperation (SAARC) could in due course, provide for new legal arrangements to protect the inhabitants of this country or they could enter into bilateral agreements with other South Asian countries to find solutions to the problem. In the South Asian context this is extremely important given that most nations in this region as pointed out earlier are yet to subscribe to the Refugee Convention and like instruments (even though the Refugee Convention is not particularly relevant in the case of climate displaced populations).<sup>206</sup> Again some of the SIDS in the Pacific like Tuvalu, Kiribati, and Vanuatu could potentially negotiate bilateral/regional treaties to accommodate some of their coastal populations in nearby Australia. Adoption of such an approach where the inhabitants of sinking SIDS are afforded priority in matters relating to rehabilitation and resettlement in new lands renders it a more manageable problem as the combined population of the states of Kiribati, Tuvalu, Tokelau, the Maldives, and the Marshall Islands in less than 600,000 people.<sup>207</sup>

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<sup>203</sup> See generally David D Caron, "Climate Change, Sea Level Rise and the Coming Uncertainty in Oceanic Boundaries: A Proposal to Avoid Conflict" in Seoung-Yong Hong & Jon M van Dyke, eds, *Maritime Boundary Disputes, Settlement Processes, and the Law of the Sea*, 1st ed, Publications on Ocean Development (The Netherlands: Brill, 2009) 1; Clive Schofield, "Shifting Limits? Sea Level Rise and Options to Secure Maritime Jurisdictional Claims" (2009) 4 Carbon & Climate L Rev 405 (HeinOnline).

<sup>204</sup> See generally McAdam, "Disappearing States", *supra* note 201.

<sup>205</sup> Randeep Ramesh, "Paradise almost lost: Maldives seek to buy a new homeland" *The Guardian* (10 November 2008), online: guardian.co.uk <<http://www.guardian.co.uk/>>.

<sup>206</sup> See Part IV, above, for the position in South Asia vis-à-vis the Refugee Convention.

<sup>207</sup> Park, *supra* note 10 at 3.

As seen earlier, in respect of the second category, as there is land available the situation is not as desperate as in the case of sinking SIDS. Still, displacement due to climate-change impacts can be particularly hard on these developing nations as they are already struggling to find resources to support developmental activities. They face a plethora of problems, including population explosion, unskilled labour, insufficient capital, and widespread environmental degradation. From the perspective of coastal zones, climate change impacts and SLR compounds existing vulnerabilities.

It is in this foreground that the need for intelligent planning towards CCCA, relief and rehabilitation gains importance. CCCA in the context of climate related displacement including SLR basically involves a three-pronged effort – firstly, it contemplates measures that directly aim to adapt to climate change impacts including SLR by calibrating corroding coastlines and sinking islands and secondly, it seeks to improve the economic and adaptive capacities of coastal populations so that they are better enabled to absorb the impacts of climate change hazards and related shocks and thirdly it seeks to enhance the resilience of coastal ecosystems.

Basically CCCA takes the form of either retreat, accommodate or protect.<sup>208</sup> In the context of fast corroding coastlines and inundation, it may be necessary to adopt a proactive approach to CCCA like the construction of artificial islands, building of sea walls, groins, ripraps, and beach nourishment.<sup>209</sup> However, it has been found that some of these hard and soft armouring can pose serious environmental problems. For instance, the construction of seawalls while saving one segment of the coastline can interfere with the littoral drift augmenting coastal erosion in another area. Similarly, the dredging of materials to nourish beaches and the placing of new layers on the degrading beach can negatively affect the coastal environment.<sup>210</sup> Hard armouring can also adversely impact the livelihood prospects of artisanal fishermen who require unimpeded visual and

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<sup>208</sup> World Meteorological Organization, *supra* note 40 at 147-49.

<sup>209</sup> For instance, see Michael Gagain, "Climate Change, Sea Level Rise, and Artificial Islands: Saving the Maldives' Statehood and Maritime Claims Through the Constitution of the Oceans" (2012) 23 *Colo J Int'l Env'tl L & Pol'y* 77 at 100 (HeinOnline).

<sup>210</sup> World Meteorological Organization, *supra* note 40 at 150.

physical access to the sea to understand water conditions and to launch their traditional fishcraft and to dry their catch.<sup>211</sup>

Again, the responsibility of constructing a seawall might be that of the local government while the ministry of environment may have responsibility over environmental protection matters. While land and property rights can be under provincial jurisdiction, matters seaward of the shoreline might fall within the ambit of the federal government in a federation. Health issues might be within the domain of the ministry of health and welfare of fishers might be the duty of another department. It is not always the case that the different tiers of government, the multifarious departments and authorities that have jurisdiction over different facets of coastal management work in tandem and this can lead to inefficiencies and wastage of resources. It is this backdrop that the concept of ICZM assumes importance.

ICZM emerges as the dominant paradigm in the management of coastal areas, ecosystems and resources by harmonizing traditional management efforts organised around particular uses based on separate governance regimes for each of these uses.<sup>212</sup> ICZM is basically a continuous and dynamic process that seeks to achieve sustainable coastal development (SCD) by reducing vulnerability of coastal areas, ecosystems and that of their inhabitants to climate related and natural hazards, helps maintain essential ecological processes, life-support systems and biological diversity, and more importantly, facilitates implementation of CCCA and helps augment adaptive capacities.<sup>213</sup> The principal idea behind ICZM is to overcome fragmentation hitherto inherent in terms of the sectoral approaches to coastal governance, and the jurisdictional overlap between the different tiers of government and multiple management systems. It seeks to replace top down bureaucratic models for coastal governance with ones that are bottom-up, participatory, equitable, inclusive, transparent and accountable.<sup>214</sup> It provides a platform to incorporate various strategies most pertinent to the coastal zones to further sustainable

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<sup>211</sup> See generally Sudarshan Rodriguez et al, *Policy Brief: Seawalls* (UNDP/UNTRS: Chennai & ATREE: Bangalore, 2008).

<sup>212</sup> Cormac Cullinan, *Integrated Coastal Management Law: Establishing and Strengthening National Legal Frameworks for Integrated Coastal Management*, FAO Legislative Study, No 93 (Rome: FAO of the United Nations, 2006) at 3.

<sup>213</sup> For more details, see Biliana Cicin-Sain & Robert W Knecht, *Integrated Coastal and Ocean Management: Concepts and Practices* (Washington, DC: Island Press, 1998) at 37-64.

<sup>214</sup> *Ibid.*

development thinking. So crucial is its value, that it is increasingly being recognised as the key mechanism within which responses aimed at CCCA will have to be incorporated.<sup>215</sup>

In short, it is clear that an overarching international treaty is inappropriate even though there may be scope for regional/bilateral instruments. And more importantly, these instruments must provide for relief and rehabilitation to the residents of sinking islands and secure their future. In all other cases, the emphasis has to be on CCCA and on land use and water management as it offers the best bet to respond to the challenges posed by climate change and SLR.

Nevertheless, the fact is that the displaced coastal populations of sinking SIDS, their governments and national governments willing to receive them do not have the financial wherewithal to provide for relief, rehabilitation and settlement. Similarly most developing states do not have the resources, financial or technological, to deal with climate-change-related hazards and implement CCCA to keep a rising sea at bay, improve the adaptive capacities of coastal communities and to ensure that degraded coastal lands are nursed back to health to sustain coastal communities. Climate change and SLR are basically due to the historical and current global emissions of GHGs, which have its origins in developed countries. Accordingly, in line with the principle of historic responsibility, developed country parties are called upon to take the lead by the international climate change regime in combating climate change and its adverse effects.<sup>216</sup> As well, articles 4.3 and 4.4, mandates that annex II countries assist developing country parties to cope with climate impacts, particularly to “the adverse effects of climate change in meeting costs of adaptation to those adverse effects”.<sup>217</sup>

Even though four funding mechanisms have been created to support climate change adaptation, the sums available are inadequate.<sup>218</sup> Moreover, neither the UNFCCC nor the

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<sup>215</sup> See *United Nations Conference on Environment and Development: Framework Convention on Climate Change*, 19 June 1993, 31 ILM 849 (adopted at New York on 9 May 1992) art 4(1)(e).

<sup>216</sup> *Ibid*, art 3.1 (stating that, “the developed country Parties should take the lead in combating climate change and the adverse effects thereof”).

<sup>217</sup> *Ibid*, art 4.4.

<sup>218</sup> See generally Deepa Badrinarayana, "Financing of Adaptation Measures" in Michael B Gerrard & Katrina Fischer Kuh, eds, *The Law of Adaptation to Climate Change: U.S. and International Aspects* (Chicago: American Bar Association, 2012) 623.

Kyoto Protocol per se deal with climate-change-related displacement,<sup>219</sup> and consequently, they do not envisage any financial support in this regard. Accordingly, there is the need for new funding mechanisms to support CCCA, relief and rehabilitation in sinking SIDS and other coastal countries being ravaged by a rising sea.

## VI CONCLUSION

From the above, we can see that climate change will exert a profound impact on coastal areas and will be the primary driver of coastal population movements. Despite nations investing heavily in border protection to prevent the entry of illegal migrants, no border is fully secure. Presently, there is a normative gap in terms of extant applicable law in dealing with an issue that has overwhelming cross-border connotations and harsh realities. However, an international treaty, per se, is rarely a solution, and moreover, the cogs of international law development grind rather slowly. Even if an international hard law instrument is entered into compliance by member states may dodge the stability of the regime. Accordingly, an international treaty on this subject may be far-fetched for the moment.

As the discussion reveals, climate change displacement can be classified based on the degree of potential impacts. In the case of some of the SIDS, they are particularly vulnerable and the situation is more acute as there is a strong possibility that land, the key natural resource that supports habitation and sustenance may be lost forever leading to displacement and the need for relief and rehabilitation of its inhabitants and accommodation in another country. Accordingly, it is necessary that the interests of the inhabitants of these sinking SIDS be protected. Here a regional/bilateral instrument rooted in the regional specifics may offer better prospects.<sup>220</sup> In all other cases, where the

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<sup>219</sup>See generally Informal Group on Migration/Displacement, *supra* note 6. Only the Cancun Agreements, in establishing a framework and in inviting state parties to enhance action on adaptation, call upon parties to undertake, “[m]easures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels.” “Decision 1/CP.16: The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention” in UNFCCC, *Report of the Conference of the Parties on its Sixteenth Session, Held in Cancun from 29 November to 10 December 2010: Addendum, Part Two: Action Taken by the Conference of the Parties at its Sixteenth Session*, FCCC/CP/2010/7/Add.1 (15 March 2011) ¶14(f).

<sup>220</sup>For instance, there have been informal movements of populations from Bangladesh into India resulting in internal strife and conflicts between these illegal migrants and the local populace. See

land continues to exist though degraded or there is alternative land even though the supply may be limited, CCCA offers the better bet. It is imperative that coastal states work towards the sustainable development of coastal areas and implement CCCA measures through the ICZM methodology. The emphasis should be on accelerating efforts to ensure that coastal development proceeds in a more organized fashion, and that economic and adaptive capacities of local communities and resilience of coastal ecosystems are improved so that coastal communities are able to remain in their homes and continue with their vocations. At the same time, relief and rehabilitation in a new land, implementation of CCCA through ICZM, are expensive prospects that also requires application of appropriate technology. This is something which affected developing countries may not be able to afford. In such circumstances, it becomes necessary to create new mechanisms under the international climate change regime to ensure dedicated funding and support for technology transfer to facilitate resettlement, rehabilitation and CCCA to protect the climate change displaced.

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Casey Gugoff, "Climate Change and Conflict in Migration from Bangladesh to Assam (India)" ICE Case Studies, Number 260, December, 2011, online: American University: Washington DC <<http://www1.american.edu/ted/ICE/assam.html>>. Therefore, it is extremely important that regional/bilateral instruments is rooted in the regional/local situation.