

The Climate-Migration Nexus and the Problem of International Cooperation

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In the summer of 1983 Richard Ullman wrote a field-defining article on the redefinition of security in international affairs. He explains, ‘We are, of course, accustomed to thinking of national security in terms of military threats arising from beyond the borders of one’s own country... It draws attention away from the non-military threats that promise to undermine the stability of many nations during the years ahead’ (Ullman 1983, 133). Non-conventional or non-traditional security issues challenge the well-being of peoples and states while caring little about national borders. They primarily arise from non-military sources; and some of these issues are climate change, resource scarcity, gender-based violence, infectious diseases, forced migration, food shortage, natural disasters and transnational crime. Despite being intractable problems, they are usually relegated to the back benches of international policy-making. This represents the core difficulty in international relations, that of operationalizing international cooperation on issues of collective security among self-interested states.

Interestingly, one of the many lessons that the coronavirus pandemic has taught political leadership from across the world is the need to broaden their lenses of viewing security. Even though government leaders habitually pledge their resolve to tackle global collective action problems, international negotiations do not always result in effective concerted action. Geopolitical interests take center-stage in world politics, over ‘soft’ security issues such as the non-traditional concerns mentioned above. To illustrate the point, a case was made by Daniel Deudney in an influential article written in 1990, against linking a non-traditional security threat such as environmental degradation to national security narratives. Deudney explains, states find greater incentive in managing traditional geopolitical threats in order to survive and prosper in a competitive world. As rational actors, states are driven to pursue self-interest *against* each other instead of collective interest *with* each other and it is therefore impossible for an issue like

climate change to elicit global collective action. For Deudney, national security and global security are irreconcilable targets (Deudney, 1990, 466). The irreconcilability of national and global security has been explored widely, particularly in the realist tradition of international relations (see Vasquez, 1999).

Writing from around the eighties, a group of scholars turned to explore game-theoretic possibilities for international cooperation with the idea that a zero-sum view of security is ultimately counterproductive and destined to break into mutual defection by states, and therefore conflict. Zero-sum games, as in Deudney's analysis, are games where 'what one player loses, the other gains' (Fudenberg and Tirole, 1991, 4). This new group of scholarship called regime theory and later, neoliberal institutionalism, tried to bridge national security interests and international security interests by modelling collective state behavior in 'non-zero sum games' (Schelling, 1958, 203) or 'games of cooperation' (Koremenos, 2013, 654).

A zero-sum view of security represents a realist view of the world in international relations theory. This suggests a general insecurity of anarchy or 'self-help' prevails, which compels states to take care of their security and prosperity in any which way they can (see Waltz, 1979). Under conditions of anarchy or the absence of an international governing authority, states worry not only about how well they fare (absolute gains) but how well they fare compared to each other (relative gains) (Snidal, 1991). But zero-sum ideas of security operate at a level of abstraction that rarely corresponds with the real world, where states typically find themselves in situations featuring both conflicts of interest as well as the necessity to accommodate and depend on each other in various degrees (Schelling, 1958). Rooted in microeconomic theories of competition, regime theorists explored possibilities for devising mutually beneficial outcomes for self-interested actors like states for broadening their agenda of national security. They also explored how international institutions and regimes could help states cooperate and coordinate action in ways and on issues they were not naturally incentivized to pursue (Krasner, ed., 1983).

In this context, the present paper looks at two non-traditional security threats, climate change and human migration, the combination of which has been recently estimated to likely produce 143 million internal climate-induced migrants by the year 2050 (The World Bank,

2018). In 1995, Norman Myers estimated a figure of 200 million cross-border climate-induced migrants by the year 2050. While the tools of empirical research have progressed with time, the key issue which the world confronts today is the range of complexities associated with eliciting cooperation on climate migration. Normative concerns on climate-induced migration have been gradually incorporated into international agreements on climate change and global guidelines on migration policy but not in the shape of actionable commitments of states as an issue of forced migration. Leveraging lessons from migration studies and regime theory in international relations, this paper explains that the international protection gap for climate migrants fundamentally stems from an uncertainty over what constitutes a climate-migrant and will therefore require a unique nature of cooperation among states to overcome a future humanitarian crisis.

International cooperation needed to address future human costs of the climate-migration nexus is found to be primarily deterred by the multiple types of migration outcomes which can result from environmental dangers. Research on climate change and human mobility patterns suggests that there is no single form of migration outcome such as forced displacement, but a varied number of outcomes such as permanent, seasonal, circular, temporary, voluntary, involuntary, compulsive and adaptive migration. Naturally, the nature of international protection required is also diverse. This paper identifies the twin problems of uncertainty of the future nature of the problem states are likely to face and that of relative gains among states, should a framework be created for establishing binding international obligations of states in this regard. Additionally, this research finds that in order to overcome these two issues, an international agreement for cooperation may face yet another obstacle in requiring mutually conflicting agreement designs in order for them to be addressed— those of centralization and flexibility.

What constitutes climate-induced migration?

The first convention of its kind, the Stockholm Declaration or the Declaration of the United Nations Conference on the Human Environment (1972) appreciated the need for international cooperation in solving global collective action issues such as environmental

degradation and climate change. Principle 1 of the Declaration states, 'a growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive co-operation among nations and action by international organizations in the common interest'. Soon after, as Cold War confrontations drew to an end, international institutions such as the World Commission on Environment and Development (more commonly called the Brundtland Commission), the Rio Earth Summit of 1992 on environment and development, and the Human Development Report of 1994 at the United Nations Development Programme (UNDP) developed the idea of human security which could potentially be threatened by environmental dangers (Dalby, 2008).

In 1985, the impact of climate change and environmental degradation on human mobility patterns was discussed for the first time by United Nations Environment Programme (UNEP) researcher Essam El-Hinnawi in his book *Environmental Refugees*. He defined the term 'environmental refugees' to include (El Hinnawi, 1985, 4):

[T]hose people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life. By 'environmental disruption' in this definition is meant any physical, chemical, and/or biological changes in the ecosystem (or resource base) that render it, temporarily or permanently, unsuitable to support human life.

El-Hinnawi describes three major types of environmental refugees: those temporarily dislocated due to natural or man-made disasters; those permanently displaced due to drastic environmental changes; and those who migrate based on the gradual deterioration of environmental conditions. He also included in these categories those displaced from their homes due to the negative impact created by political violence and warfare on the environment (El-Hinnawi, 1985).

The Intergovernmental Panel on Climate Change (IPCC, 1990) in their First Assessment Report noted that the ‘greatest single impact’ of climate change could manifest on human migration, with millions of people to have to likely face displacement due to shoreline erosions, coastal flooding and agricultural disruption (Brown, 2008, 11). In response to emerging research on migration driven by climate events, the United Nations High Commissioner for Refugees (UNHCR, 1993) identified four root causes of refugee flows in the yearly *State of the World’s Refugees Report*, one of which was environmental disasters (Lonergan, 1998, 5).

Political and environmental scientists such as Jodi Jacobson (1988), Thomas Homer-Dixon (1991), Norman Myers (1992; 1995; 1997), Graeme Hugo (1996), Steve Lonergan (1998), and Jon Martin Trolldalen and others (Trolldalen et al., 1992) conducted early research on the links between environmental degradation and human mobility patterns. Some of these portended ominous links between environmental threat, human displacement and political conflict (Kaplan, 1994). Fears of an unprecedented cross-border displacement of ‘environmental refugees’ heightened when in 1995 British environmentalist Norman Myers projected the number of ‘environmental refugees’ in a warmer world to potentially reach 200 million people by the year 2050 (Myers, 1995).

Some of the early works (Hugo 1996; Bates 2002) in this field also explored the differentiated and complex outcomes of climate migration. For example, Graeme Hugo (1996, 126) differentiates voluntary migration outcomes in cases of gradual degradation of the environment from involuntary migration outcomes in cases of sudden environmental disasters. Diane Bates (2002) distinguishes between the three sources of environmental ‘disasters’, environmental ‘expropriation’ and environmental ‘deterioration’ for driving human mobility differently. She defines environmental disasters as unintended climate events created naturally or by human activities; environmental expropriation as the wilful destruction of the environment through developmental activities; and, environmental deterioration as an incremental degradation in the living environment due to pollution or depletion of resources (Bates, 2002, 470). A continuum of climate events creates a continuum of human migration outcomes, classified as involuntary, compelled and voluntary. She explains, ‘disaster and expropriation refugees have limited control over whether environmental changes will produce migration. In contrast,

environmental emigrants determine how they respond to environmental change.’ (Bates, 2002, 473)

From the first decade of the 2000s, a series of studies made further forays into the complex nature of migration outcomes influenced by environmental dangers. A leading project, *EACH-FOR* (Environmental Change and Forced Migration Scenarios Project) (Jäger et al., 2009) covered 22 case studies in six regions of the world to assess the impact of climatic factors on migration. In the same year, the *German Marshall Fund Transatlantic Study Team on Climate Change & Migration* focused on the complicated nature of climate-induced migration by focusing on both ‘push’ factors (such as livelihood insecurity and environmental hazard, conflict, gender inequality and demographic pressures) and ‘pull’ factors (such as demand for labor and aging of the population) for migration (Matin et al., 2010). A collaborative study between the UNHCR and the United Nations University-Institute for Environment and Human Security (UNU-EHS, 2011) which studied refugees in Ethiopia and Uganda explored links between environmental insecurity and political or ethnic issues. It went on to find climatic and non-climatic factors such as state oppression to be greatly interconnected in inducing migration. Other similarly themed projects such as the UK’s *Foresight Project* (2011) and the *Where the Rain Falls Project* (Warner et. al, 2012) discovered empirical evidence supporting the contribution of climatic factors to human migration in multifaceted ways. These studies suggested that climatic factors often exacerbate existing economic, social and political drivers of migration and it is difficult to identify migrants for whom environmental factors are the sole dominating drivers (Warner et al., 2013, 18).

Renaud et al. (2011, 16) developed a decision making framework for explaining differences in migration outcomes influenced by climate events. They identified three migration outcomes based on the degree of ‘choice’ exercised by affected communities— environmental emergency migrants, environmentally forced migrants and environmentally motivated migrants. They distinguished not only between forced and voluntary or motivated migration of vulnerable populations but also between the nature of urgency brought on by environmental threats that may potentially take lives on the one hand (environmentally emergency migration) and that which is not immediately life-threatening on the other (environmentally forced migration) (Warner et al., 2013, 10). Their research along with others (Jäger et al., 2009; Tacoli, 2011; Foresight, 2011;

Warner et al., 2012; Van der Land and Hummel, 2013) also suggested that slow-onset climatic factors leading to environmentally motivated migration may be voluntary in nature. The authors explain that the reason for their classification of choice is for highlighting ‘the different ways in which the environment prompts people to move and the different mode/pace of action taken by the affected person(s).’ (Renaud et al., 2011, 17)

Distinguishing between ‘permanent’ and ‘temporary’ migration, the authors also find that the duration of migration will depend on socio-economic factors such as the extent of damage caused to the environment (which can in turn determine the chances of migrants returning); casualties or trauma suffered; institutional and financial support; strength of various economic sectors; and social or demographic factors such as composition of the remaining and returning population (Renaud et al., 2011, 22).

This new expansion in the understanding of the subject of climate migration involved the exploration of different kinds of climate events which could potentially result in multiple forms of migration outcomes. Research indicated the need to shift away from unidimensional concepts such as ‘environmental refugees’ or ‘environmental displacement’. While the urgency and compulsion associated with the flight of Convention refugees under the 1951 Refugee Convention could in some instances be compared with the compulsive displacement of people in the face of sudden-onset disasters (such as floods, earthquakes, volcanoes, landslides, or tsunamis), the label of ‘environmental refugee’ or forced migration did not have the necessary scope to engage with slow-onset or gradual climate events which produced entirely different forms of migration outcomes, many of which were planned, adaptive, and strategic in nature. Most importantly, the socio-economic resilience of the community served as an important determinant of the nature of migration which followed.

The shift in the concept of climate-induced mobility from an unidimensional idea of compulsive displacement (such as El- Hinnawi’s idea of ‘environmental refugees’) to a multidimensional and multifaceted idea of climate-induced human mobility (which included different migrant outcomes) was reflected in the International Organization for Migration’s (IOM, 2007) definition of environmentally induced migration as ‘persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or

choose to do so, either temporarily or permanently, and who move either within their country or abroad.” Positively comparing developments in emerging research and the state of institutional response to the issues being studied, Koko Warner (Warner et al., 2013, 10) of the UNU-EHS explains the IOM’s definition of environmentally induced migration to having encompassed ‘both ‘forced’ and ‘voluntary’ migration, as it uses the expressions ‘obliged to leave’ and ‘choose to do so’, respectively.’

However, Walter Kälin and Nina Schrepfer (Kälin and Schrepfer, 2012) find that the element of choice in voluntary outcomes is often not a simple one. For the authors, the point of departure between forced or voluntary migration should not be the subjective motives of individuals or communities behind their decision to move, but rather whether, in light of the prevailing circumstances and the particular vulnerabilities of those concerned, they can be required to return where they came from (Warner et al., 2013: 38-43). They explain, ‘voluntary - contrary to what the term suggests - does not mean to be able to decide in complete freedom. Rather, voluntariness requires certain room with realistic options to decide upon’ (Kälin and Schrepfer, 2012, 62). They devise a ‘returnability’ test to identify whether it is legally permissible, factually feasible and morally reasonable for persons to return to their country of origin or permanent residence.

Legal impediments or ‘permissibility’ refers to the return of migrating persons being contingent on the international human rights legal regime. This means the returnability of migrated persons must not threaten their basic rights of life, safety, liberty or health. Factual impediments or ‘feasibility’ refers to practical problems such as disconnected landscapes, loss of documents, or administrative disorder that may imperil or impede the return of migrated persons. Humanitarian impediments or ‘moral reasonableness’ refers to the moral act of not returning migrated persons to unviable ecological or social living conditions from which they had fled out of compassion and humanitarianism (Kälin and Schrepfer, 2012, 66). The element of choice exercised by migrants which had been studied so far (Jäger et al., 2009; Tacoli, 2011; Renaud et al., 2011; Foresight, 2011; Warner et al., 2012; Van der Land and Hummel, 2013) is fundamentally altered with the returnability test. For Kälin and Schrepfer, voluntary migration outcomes must be tested to check for legal, factual or moral impediments to return, failing which they become involuntary outcomes of forced displacement .

Migration outcome was also found to be influenced by community or household resilience and degree of vulnerability. Explaining the links between migration and socio-economic resilience, François Gemenne and Julia Blocher from the Hugo Observatory of Environmental Migration explain, ‘an important factor appears to be the disposition of, or lack of disposition of, various capitals required to migrate. Household resources may equate to the capacity to use migration as a strategy, capacity mediated by a number of important social, cultural and economic factors.’ (Gemenne and Blocher, 2016, 8) Similarly, Walter Kälin and Nina Schrepfer (Kälin and Schrepfer, 2012, 6) describe the effects of resilience on migration outcomes in the following terms:

$$\text{Impact of the disaster} = \frac{\text{Hazard} + \text{Vulnerability}}{\text{Capacities}}$$

In shifting away from the narrower notion of the environmental refugee to considering multifaceted elements constituting the climate-migration nexus, the research agenda on climate-induced migration has expanded widely (see Figure 1). Migration outcomes can now be broadly understood (see Figure 2) as involving short-term, seasonal and permanent migration (the element of time); voluntary, motivated, or involuntary migration (the element of decision); and as adaptive or compulsive (the element of adaptation). The diversity of migration outcomes has been discussed in the following sections. Institutional responses to the need for international legal protection for migrating communities and households have also closely followed the body of research exploring diversity in outcomes.

Institutional responses and normative frameworks

International climate policy negotiations began integrating concerns on migration and displacement in 2010. Between the Conference of Parties (COP) meetings of the UNFCCC of

2007 and 2010, research and operational organizations worked with states parties to include climate-induced displacement in climate change discussions. Findings from research based on field observations such as the EACH-FOR project were submitted to the Ad-hoc Working Group on Long-Term Cooperative Action (AWG-LCA) which had been created as part of the Bali Action Plan of COP13 in 2007 (Warner, 2011). Three years later at COP16 in Cancun, Parties committed to the Cancun Adaptation Framework, including para 14(f) on migration and displacement, which read as follows:

14. Invites all Parties to enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following:

....

(f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels;

This primary step toward bringing international attention to climate-induced migration led to the development of a normative framework on ‘disaster displacement’ with the Nansen Initiative of 2012. The Nansen Conference on climate change and displacement convened by the Norwegian government in 2011 was a step toward the development of the Nansen Initiative the following year. It created ten foundational ‘Nansen Principles’ which discussed the need for developing international and regional cooperative frameworks to help nations protect their people from a range of migration outcomes influenced by climate change. In particular, the conference focused on the need to, ‘continue this discussion on how to “operationalise” clause 14 (f) of the Cancun Adaptation Framework.’ It also suggested that ‘a dedicated forum may be needed to formulate practical guidance to this end’ (The Nansen Conference, 2011, 10). The

Platform on Disaster Displacement was formed in May 2016 to this effect and aimed at implementing the Protection Agenda of the Nansen Initiative.

Launched by the governments of Switzerland and Norway in 2012, the Nansen Initiative became a bottom-up state-led consultative process with multi-stakeholder involvement for developing an international legal protection agenda for those displaced for reasons of environmental disasters and climate change. It launched The Agenda for the Protection of Cross-Border Displaced Persons (The Protection Agenda) in 2015. The Protection Agenda focused on the phenomenon of cross-border disaster displacement. However, while highlighting the humanitarian nature of the need for protection against disaster displacement, it did not aim to expand states' international legal obligations under the international refugee law regime or human rights regime, nor did it call for the convention of a new binding international convention on cross-border disaster displacement. Instead, it was a call to action, which tried to compile effective best practices of states such as the provision of temporary protection and humanitarian visas to affected communities. It also aimed at supervising and enhancing national action in strengthening the adaptive capacity and disaster resilience risk of their people (Protection Agenda, 2015, 7). The Protection Agenda was based on other international conventions and normative frameworks such as the 1998 UN Guiding principles on Internal Displacement, UNFCCC, the Sendai Framework for Disaster Risk reduction 2015-2030, the UN's 2030 Agenda for Sustainable Development and the World Humanitarian Summit.

Following the IOM's definition of environmentally induced migration in 2007, a dedicated Migration, Environment and Climate Change (MECC) Division was created in 2015. This initiative made it important for environmental factors to be integrated across all areas of migration management, which included prevention, preparedness and response to displacement, border management, labour migration and integration, and return and reintegration (IOM, 2015). It also took into consideration research on the diverse migration outcomes of climate change and environmental degradation by aiming at both the prevention of forced migration due to sudden-onset disasters as well as enhancing the resilience of migrants electing to migrate as a form of adaptation when confronted with slow-onset disasters. Other than operational activities such as capacity building programmes and policy work and advocacy, the MECC division has also produced the Migration, Environment and Climate Change: Evidence for Policy (MECLEP)

project which studied the contributions of migration as an adaptive strategy in six countries—Dominican Republic, Papua New Guinea, Vietnam, Haiti, Kenya and Republic of Mauritius—confronting climate change and disasters (Gemenne and Blocher, 2016).

Following these developments, a decisive step was taken at the COP 21 Meeting of 2015 convened at Paris, where states parties decided to ‘develop recommendations for integrated approaches to avert, minimise and address displacement related to the adverse impacts of climate change’ in Article 50 of the Paris Agreement. It also recognized the need to set up a task force to this effect in the decision text. The scope of the Task force on Displacement would include:

[A] task force to complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention including the Adaptation Committee and the Least Developed Countries Expert Group, as well as relevant organizations and expert bodies outside the Convention, to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change.

In the following year, the UN General Assembly adopted the New York Declaration for Refugees and Migrants, in which it called for the development of two global compacts, a global compact on refugees and a global compact for safe, orderly and regular migration (GCM). These state-led, non-binding and voluntary guidelines were endorsed on 17 December 2018 in New York and on 10 December 2018 in Marrakech respectively. Although not legally actionable, the Global Compact for Migration enhanced international institutional responses reached at Cancun in 2010, at Paris in 2015 and at New York in 2016 to address the effects of the climate-migration nexus. Following the New York Declaration of 2016, the Environmental Migration Portal of the IOM illustrated the importance of these institutional responses in the following terms:

We should not take it for granted that awareness on climate and environmental migration is given. Only five years ago such an acknowledgement was neither obvious nor usual. Throughout 2014, 2015 and 2016, major policy processes have formally recognized that migration in the context of climate change and environmental degradation cannot be ignored, if the targets for human well-being are to be reached.

The New York Declaration and the Global Compact for Migration make the case for addressing multiple migration outcomes in cases of slow-onset and sudden-onset disasters differently. This acknowledged that while certain households and communities confronting permanent migration can require planned relocation and resettlement initiatives, others confronting slow-onset events can require better migration management tools such as the opportunity and resources to migrate with dignity. Building on research discussed before (Jäger et al., 2009; Kälin and Schrepfer, 2012; Warner et al., 2013; Gemenne and Blocher, 2016; 2017), they acknowledge the multicausality of migration as environmental drivers interact with and exacerbate already existing political, social or economic factors to influence people's decision to migrate.

From the Cancun Adaptation Framework of 2010 to the Global Compact for Migration in 2018, the importance of normative institutional responses to the issue of climate migration has been in the acknowledgement of the nexus between a continuum of migration outcomes and a continuum of environmental dangers. Despite being non-binding on state action, they help in placing these concerns on the international agenda and in the forefront of global public opinion discourses. They also help in acknowledging that the diversity of migration outcomes makes the issue of climate migration an uncertain collective action problem to solve in at least two ways. First, climate migration is a differentiated problem which will require differentiated responses from states. This suggests that states will have to respond differently in situations where migration can be prevented, where migration can be facilitated, and in providing humanitarian protection when forced migration cannot be prevented. Second, the impact of climate hazards is multiplied by low resilience of households and communities. Climate hazards can also in turn exacerbate existing socio-economic and political drivers of migration, thereby turning the issue into a larger problem of international development. Absent a direct causal link between climate hazards and human displacement, it becomes difficult to identify a single problem needing solution. Unlike the refugee regime where international obligations are directly attributable to states or in climate change negotiations (for example, under the Kyoto Protocol and the Paris Agreement) where traditional emitters assume greater responsibility, the problem of protection for climate migrants is harder to define and act on.

Several continuums, several migration outcomes

The key elements of the research program on the climate-migration nexus broadly align with Figures 1 and 2 below. Beginning with El-Hinnawi’s preliminary research on environmental refugees (El-Hinnawi, 1985), there has been a proliferation of studies based on the experiences of vulnerable households, communities and countries from across the world. Most importantly, a continuum of environmental dangers is found to affect a continuum of migration outcomes in multiple ways (See Fig. 2). The determining factors of climate migration have been found to be three: the nature of climate hazard; socio-economic resilience of communities; and resettlement initiatives and policy interventions by states in cases of internal migration. These three factors generally shape the migration outcomes of people.

<i>Independent Variables</i>	<i>Dependent Variables</i>
Nature of climate hazard*: Sudden-onset event/Slow-onset event	Duration of migration*: Permanent/ Seasonal/ Short-term
Socio-economic resilience of communities*: Higher vulnerability/Lower vulnerability	Choice in migration*: Voluntary/ Involuntary
External resettlement interventions or anticipatory relocation of vulnerable communities	Nature of mobility*: Migration (adaptive)/ Displacement (compulsive)

Fig. 1: Overview of the Climate-Migration Nexus

[Sudden-onset event] → short-term migration; involuntary migration; displacement
[Slow-onset event + Lower vulnerability (Higher resilience)] → seasonal/circular migration; voluntary migration; migration as an adaptive strategy

[Slow-onset event + Higher vulnerability (Lower resilience)] →
permanent migration; involuntary migration; displacement

Fig. 2: Three broad migration outcomes from the five continuums (fields marked by *)
found in Fig. 1

Migration outcomes can vary by the duration or the time period of migration and displacement; the existence of realistic choice or the opportunity for being able to decide to migrate; and the extent to which migration can serve as an adaptive strategy to communities facing slow-onset hazards. In cases of sudden-onset disasters, there is usually little choice but to migrate. The duration of migration can vary with the extent of damage caused to the environment by the event (Renaud et al., 2011). Massive impact events such as tsunamis, floods or tropical storms typically lead to a greater loss of land, natural resources and livelihoods. Relief efforts, institutional and financial support, and resettlement interventions from the state or nongovernmental organizations can also determine how long the displacement can last. In cases of slow-onset disasters, sections of the community often migrate seasonally to diversify income generation options. Seasonal migration helps reinforce the economic resilience of households and communities to confront the climate hazard for a longer period of time. Seasonal migration can therefore become an adaptive strategy in these cases to prevent permanent migration (Gemenne and Blocher, 2017). In cases of low resilience and high vulnerability of communities, slow-onset events can also trigger involuntary displacement of people.

Lastly, low lying island states present a special case of slow-onset disasters (Kälin and Schrepfer, 2012). As a consequence of rising sea-levels these states are likely to face permanent displacement of their people in the future. This was particularly reflected when Ioane Teitiota, a national of the Republic of Kiribati, lost a landmark case against the government of New Zealand in 2015 which denied him and his family asylum despite unsustainable conditions of life in his home state, the central Pacific Ocean island of Kiribati. The hometown of Teitiota was in Tarawa, the capital of Kiribati, which was only 3 metres above sea level at its highest point. But declining his appeal, the Immigrant and Protection Tribunal (IPT) of New Zealand noted, ‘the

limited capacity of South Tarawa to carry its population is being significantly compromised by the effects of population growth, urbanisation, and limited infrastructure development, particularly in relation to sanitation. The negative impacts of these factors on the carrying capacity of the land on Tarawa atoll are being exacerbated by the effects of both sudden onset environmental events (storms) and slow-onset processes (sea-level-rise).” However, the IPT considered that the appellant ‘has undertaken what may be termed a voluntary adaptive migration,’ and that his decision to migrate to New Zealand could not be seen as forced. For example, the UN Human Rights Committee noted (CCPR, 2016):

After a lengthy analysis of international human rights standards, the Tribunal considered that “while in many cases the effects of environmental change and natural disasters will not bring affected persons within the scope of the Refugee Convention, no hard and fast rules or presumptions of non-applicability exist. Care must be taken to examine the particular features of the case.” After further examination, the Tribunal concluded that the author did not objectively face a real risk of being persecuted if returned to Kiribati... For these reasons, he was not a “refugee” as defined by the Refugee Convention.

The absence of an international agreement which can protect climate migrants affects those confronting permanent and involuntary migration the most. However, owing to the large number of migration outcomes, states have found it challenging to cooperate on this issue.

The need for international cooperation

International regimes are constituted by ‘implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international relations’ (Krasner, 1983, 2). These constituents can be further understood as: ‘Principles are beliefs of fact, causation, and rectitude. Norms are standards of behavior defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action.

Decision-making procedures are prevailing practices for making and implementing collective choice' (Krasner, 1983, 2).

International regimes or international institutions create, develop and embody international law. The International Court of Justice (ICJ) classifies the robustness of international law along a hierarchy of three types— treaties and international conventions with 'expressly recognized rules' as first; customs which involve practices 'accepted as law' as second; and general principles 'recognised by states' as the weakest of the three in application (Armstrong, Farrell and Lambert, 2007, 25). Expressly recognised rules in treaties and conventions (or treaty-law) are the most difficult of the three to arrive at when the primary players of international politics are sovereign states operating with the aim of maximizing self interest (Hasenclever, Mayer and Rittberger, 1997).

International regimes on climate change under the the United Nations Framework Convention on Climate Change (UNFCCC) such as the Cancun Adaptation Framework of 2010 and the Paris Agreement on Climate Change of 2015 have included concerns on climate-induced migration as normative guidelines to state action. The Paris Agreement also established a Task Force on Displacement to develop recommendations for integrated approaches to advert, minimize and address displacement related to the adverse impacts of climate change and disaster (IOM, 2015). Global institutions on issues of migration were slower to include climate and environmental dimensions. In recently concluded instruments such as the New York Declaration of 2016 and the Global Compact for Migration of 2018, concerns on climate-induced migration have been adopted as soft law provisions. The agreement text of the GCM also highlights the importance of policy coherence with international regimes of climate change, disaster and environmental governance such as the UNFCCC, the United Nations Convention to Combat Desertification (UNCCD), the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction. Normative guidelines and frameworks can be understood as 'soft' international law which do not include legally enforceable commitments but nevertheless guide and coordinate state action according to international humanitarian standards.

The usefulness of soft international law, which covers the two weaker sources of international law (customs which involve practices ‘accepted as law’ and general principles ‘recognised by states’) according to the ICJ, is limited. They help outline issues of global concern and as in the present case incorporate issues such as climate change, environmental disasters, and migration in overlapping frameworks for guiding state action. However, the international legal protection gap which exists in cases of permanent and involuntary climate migration can be proportionately addressed only through treaty-law.

The problem of international cooperation

Migration and displacement in the context of climate change and environmental disasters are multicausal. In literature discussed above, no direct and exclusive causality has been established among them (Jäger et al., 2009; Warner et al., 2012; Kälin and Schrepfer, 2012). Environmental dangers have been found to be exacerbated and to in turn exacerbate other drivers of migration; whether ‘push factors’ such as socio-economic vulnerability and political or ethnic violence, or ‘pull factors’ such as resettlement initiatives and income-generation opportunities in the community of destination (Matin et al., 2010). These, along with a proliferation of migration outcomes make it a difficult problem to define. The agenda of identifying forced climate migrants is therefore the primary pathway to international consensus on generating legal commitment from states for addressing the protection gap.

In the ruling produced in *Ioane Teitiota v. New Zealand*, Teitiota’s appeal for asylum in New Zealand was rejected on the grounds that his migration could not be classified as ‘forced’ or as arising out of persecution, which is the ground on which Convention refugees can claim international legal protection. Without an acceptable definition on what constitutes a forced climate migrant, it is hard to bring states to the negotiating table for distributing international legal obligations. As discussed in earlier sections, there exist several methodological differences among researchers studying the element of choice in climate migration. For example, Walter Kälin and Nina Schrepfer (Kälin and Schrepfer, 2012) dismiss the category of voluntary migration and replace it with an ex-ante returnability test for migrants. According to them, only

those who face neither legal, moral or humanitarian impediments to return to their homeland or community of origin can be termed as voluntary migrants. Fabrice Renaud, Koko Warner, Olivia Dun and Janod Bogardi (Renaud et al., 2011) present a different hypothesis on the issue of subjective choice exercised by migrants. They interpose a category of environmentally forced migrants (forced migrants not facing an immediate life threat) in between environment emergency migrants (forced migrants facing an immediate threat of life) and environmentally motivated migrants (those migrating voluntarily or in anticipation).

A closely linked second problem arises with the problem of relative gains of states. Explaining the strategies of cooperation under conditions of anarchy, regime theorist Kenneth Oye explains, when states 'interact' or depend on each other for mutually beneficial outcomes for a foreseeably long period of time in the future, they are rationally driven to cooperate rather than defect. For example, in the language of elementary game theory this can be understood in the following terms (Oye, 1985, 13):

Under single-play conditions without a sovereign, adherence to agreements is often irrational. Consider the single-play Prisoners' Dilemma. Each prisoner is better off squealing, whether or not his partner decides to squeal. In the absence of continuing interaction, defection would emerge as the dominant strategy. Because the prisoners can neither turn to a central authority for enforcement of an agreement to cooperate nor rely on the anticipation of retaliation to deter present defection, cooperation will be unlikely under single-play conditions. If the prisoners expect to be placed in similar situations in the future, the prospects for cooperation improve.

This suggests that under the 'shadow of the future' or in the context of a long-term problem protracted into the future, such as the humanitarian costs of climate migration as climate change hastens, 'a promise to respond to present cooperation with future cooperation and a threat to respond to present defection with future defection can improve the prospects for cooperation' (Oye, 1985, 15). This represents the usefulness of strategies of reciprocity or a 'Tit-for-Tat Strategy' (Oye, 1985, 17) which creates the need for cooperation at the present moment in order

to successfully address a long-drawn problem of the future which can otherwise affect states in unprecedented, uncertain or unequal ways.

However, Joseph Grieco (1988) does not find it possible for the shadow of the future to always create conditions of cooperation, because under anarchy where states are responsible for their own security and survival, he finds relative gains making all the difference. This takes the cooperation problem back to a zero-sum game where states are not only bothered about the size of their absolute gains from which they can benefit through cooperation but also the size of their relative gains vis-a-vis each other. The problem of international cooperation can no longer be framed as “Can both of us gain?” but as “Who will gain more?” (Waltz, 1979, 105; Hasenclever, Mayer and Rittberger, 1997, 16). Relative gains can enhance or offset relative capabilities of states, and it is that which forestalls cooperation in international anarchy.

This implies that although historically traditional emitters from the Global North are more responsible for contributing to climate change, they might not agree to disproportionate responsibility for protecting forced climate migrants originating from poorer countries. For example, in Koko Warner’s description of the process by which researchers collaborated with COP representatives at the UNFCCC Meeting of Cancun to include concerns of climate migration in the international agenda for the first time, one can see an illustration of the relative gains problem (Warner, 2011, 13-14):

At the current time, however, there is [sic] appears to be little Party appetite for notions like an international convention to protect ‘climate refugees’, as these require commitments, may imply liability, etc... The key will be to align Party appetite and needs with a range of appropriate and politically feasible options... there is sensitivity around issues of liability and compensation, assignment of blame or historical responsibility. Research and operational organizations (especially in the UN family) should avoid asking for overly complex arrangements or for things that require Parties to use large amounts of political capital to achieve. Calls for large new international agreements on “climate refugees” may seem, from a Party perspective, difficult to achieve at this point.

Despite an existing ‘shadow of the future’, the means for international cooperation for addressing the protection gap is scarce. Two problems of international cooperation can be identified. First, there is an overwhelming problem of definition which creates an uncertain, undefined problem for states to have to cooperate on. A protection gap exists for permanent and involuntary migrants, primarily for the absence of a consensus definition, even though research organizations and international institutions like the IOM, UNFCCC, UNHCR and GCM have collaborated for a long period of time to produce several codifications of normative guidelines and best practices of states. Second, the impediment of relative gains can potentially overrule the shadow of the future. Although an unprecedented migration crisis is already upon us and may worsen with climate change, states find no incentive to commit to differential responsibility in a cooperation problem the full scope of which remains yet undefined.

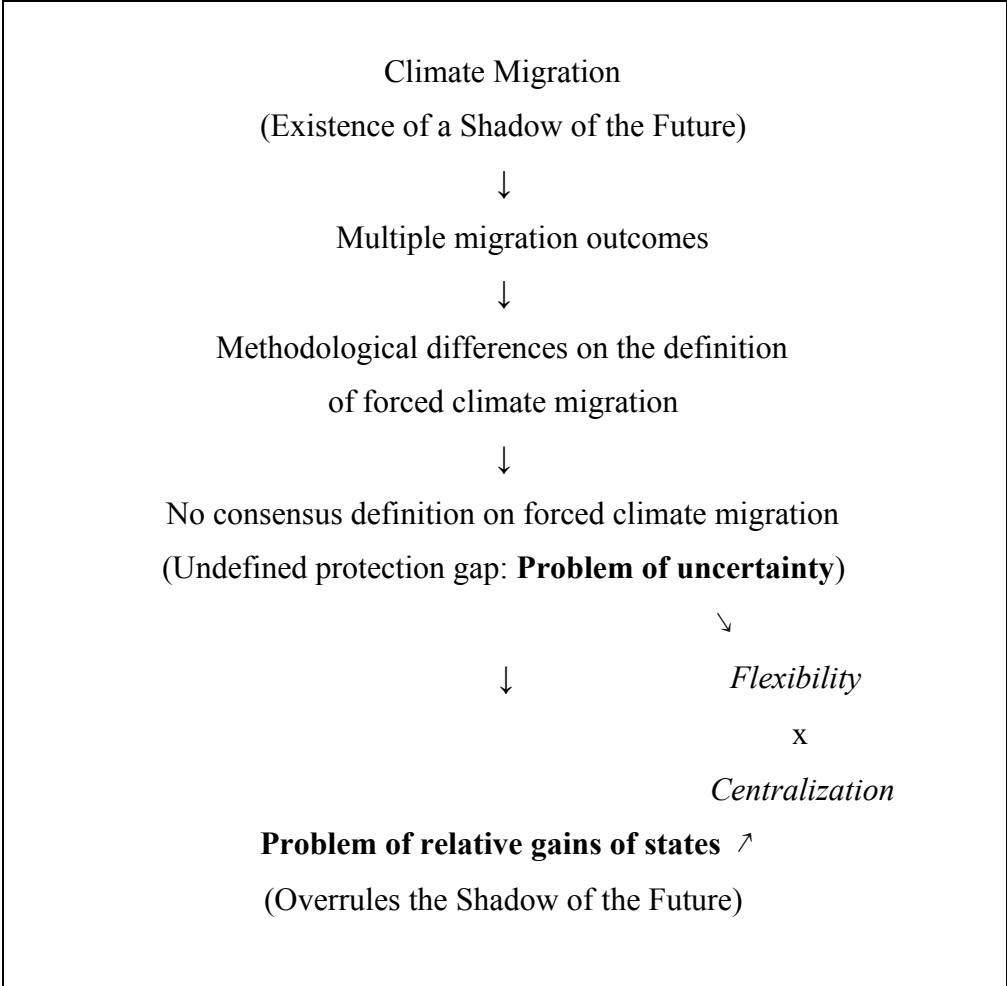


Fig. 3: The Problem of International Cooperation

States design international agreements in non-altruistic and rational terms. When an institution is designed according to the peculiarities of a cooperation problem at hand, it can help overcome the dilemma of self-interest and also make international cooperation more feasible and durable (Koremenos, Lipson, and Snidal, 2001). As described above, the cooperation problem of creating legal protection measures for climate migrants is constituted by the problem of definition and the problem of relative gains of states. However, the cooperation problem heightens because these two components require two mutually contradictory designs for resolution.

The problem of uncertainty over the scope of the issue represents the absence of a consensus definition on who a forced climate migrant is. This is exacerbated by the fact that the world is additionally looking at an unprecedented crisis. Climate change can interact with issues of development such as security of life, liberty, health, education, livelihood and political violence and ethnic strife in diverse ways. The poorest countries, facing sea-level rise, desertification and retreating glaciers, have been estimated to be the hardest hit by climate change (The World Bank, 2018). However, uncertainty on the scope of a future crisis can be bridged through a flexible design of international commitments to fill the protection gap. Two forms of institutional flexibility have been explored in existing regimes — adaptive and transformative (Koremenos, Lipson, and Snidal, 2001, 13). An adaptive agreement can mean the accommodation of ‘escape clauses’ for states in order to incentivize them to join. They leave decisional room for states if insupportable conditions of cooperation arise in the future. This facilitates cooperation among states in the short-term while leaving the future to its own devices. Transformative flexibility assures states with the possibility of renegotiation and modification of their obligations in the light of future conditions. This is a more useful strategy of flexible design which can ensure state participation and autonomy at the same time, thereby creating greater incentive for cooperation. Therefore, A flexible form of treaty-law can help overcome one part of the cooperation problem.

But the second half of the cooperation problem is essentially a problem of enforcement and will require unyielding features of centralization to ensure that states do not defect from their global commitments for reasons of relative gains. States are sovereign entities and will not readily agree to disproportionate and unfavorable obligations but even if they do, differential obligations among states can lead to future defection. One has to only look at the history of climate change negotiations to recognize the problem of relative gains.

Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) is a principle within the UNFCCC that acknowledges that traditional emitters should take on greater responsibility in alleviating the harmful consequences of climate change. The principle of CBDR-RC is enshrined in the 1992 UNFCCC treaty, which was ratified by all participating countries. The text of the convention reads: "... the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions." The Convention divides countries into Annex I and non-Annex I states. CBDR-RC and the annex provisions were also codified in the 1997 Kyoto Protocol according to which emissions of non-Annex I countries were legally bound in exchange for greater obligations to be borne by Annex I countries. Referring to the element of unequal responsibility, the United States declined to ratify the treaty in a Senate Resolution (The United States Senate, 1997) in the following terms:

[T]he United States should not be a signatory to any protocol to, or other agreement regarding, the United Nations Framework Convention on Climate Change of 1992, at negotiations in Kyoto in December 1997 or thereafter which would: (1) mandate new commitments to limit or reduce greenhouse gas emissions for the Annex 1 Parties, unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period; or (2) result in serious harm to the U.S. economy.

Surprisingly, it also went on to withdraw from the Paris Agreement in 2017, which was designed as a decentralized non-binding agreement based on voluntarily determined national targets. These show little prospect for dealing with the problem of relative gains on the issue of forced climate migrants. Features of centralization could not solve the problem of relative gains in the case of the Kyoto Protocol, nor could features of decentralization solve the problem of enforcement of national commitments for global benefit. This also brings the cooperation problem to clearer shape. Features of centralization and flexibility are mutually contrasting designs which cannot exist together. An international agreement will have to overcome these polar concerns to address the protection gap for forced climate migrants (See Figure 3).

Conclusion

Progress towards international cooperation on creating legal protection measures for climate migrants faces several obstacles. The present paper identifies the need to develop a new international legal standpoint on climate migration, but finds that absent crucial consensus on the status or concept of climate migrants, no legal framework can be developed. Building on previous research, it discusses prevailing methodologies for identifying several categories of climate migrants and the range of protection measures needed to address each outcome. However, existing soft-law provisions in international instruments of climate change and the newly convened Global Compact for Migration have been unsuccessful in addressing the protection gap of permanent and involuntary climate migrants. By examining international negotiation processes of closely related agreements from the COP Meetings of the UNFCCC, this paper identifies the impediments for developing binding international obligations of states by highlighting the unique cooperation problem which they confront on this issue. It also highlights an additional problem of international institutional design in which international cooperation on the protection gap may require mutually contrasting design features for fulfilment.