# Chapter 5
# Looking Ahead: A Human Security Perspective to Tackling the Potential for Widespread Environmental Migration in Latin America

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**Abstract** By 2050, between 25 million and 1 billion people globally could be displaced by extreme weather events, landscape degradation, and the environmental impacts of climate change. Environmentally displaced persons (EDPs) are people who are compelled to leave their homes in either the short- or the long-term because of an environmental hazard that affects their livelihoods, health, or physical safety. Latin America is a particularly important – and relatively understudied – region in which to explore migration driven by climate change, environmental degradation, inequalities, and conflict. This chapter advocates for a regional approach to future pathways of environmental migration in Latin America. Key to this approach is to first begin to sustainably manage natural resources and aggressively practice climate change mitigation activities within the region. These close ties could make migration slightly easier within the region than outside it and could drive more cross-border migration than in other regions. Long-term risk planning efforts must improve international and regional cooperation, capacity-building, and adaptive management of refugee resettlement programs, in order to address the reality of future environmental migration in an orderly manner. Migration should be considered as a valid adaptation approach in the face of rapid-onset events and for lowering exposure to slow-onset events and should be included in climate change adaptation action plans. Adaptive and forward-looking planning for environmental displacement is a way to avoid the anxiety, scrambling for funding sources, and sudden state of emergency in countries often associated with new refugee flows.

**Keywords** Climate change · Environmental migration · Latin America · Migration policy · Regionalism

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## 1 Introduction

No longer something for future generations to deal with, climate change and environmental degradation have already propelled migration in Latin America. Central American's northern triangle, made up of Honduras, El Salvador, and Guatemala, has long been a major source of migrants, both internally and to neighboring countries, notably to Mexico, Costa Rica, and the United States (Blitzer, 2019; Carte et al., 2019). There has been a spike since 2014 of Central American migration to the United States, primarily because of climate change impacts, particularly drought related to El Niño in the Dry Corridor that stretches across El Salvador, Honduras, and Guatemala (Steffens, 2018a, b). In 2018, 50,000 families were turned away at the U.S. border, thus doubling the number of the year before. By the first half of 2019, 66,000 families were apprehended at America's southern border (Blitzer, 2019). Some migrants that reach the United States' border surrender themselves to American law enforcement to claim asylum – which would formalize their status in the United States (Cheatham, 2019). About 13% of those that claimed asylum were granted status in 2018, which accounts for more than double the number of acceptances in 2015 (Ibid).

The three northern triangle countries, along with Nicaragua, are consistently listed among the twenty world nations that are most vulnerable to climate change (Bouroncle et al., 2017). Between 1992 and 2011, "Honduras was the world's most vulnerable country to extreme weather events, Nicaragua the 3rd most vulnerable, Guatemala the 11th, and El Salvador the 15th" (Bouroncle et al., 2017: 124). Aside from weather-related natural disasters, particularly hurricanes and cyclones, Central America has experienced increases in temperature, stronger dry seasons, and droughts but also more frequent floods and reduced soil fertility (Bouroncle et al., 2017; Steffens, 2018a, b). Agriculture is particularly vulnerable to climate change-related natural disasters and impacts (Bouroncle et al., 2017). Guatemala's economy has long been built on the back of an agro-export model that eschews smallholder production in favor of large-scale extractive agricultural industry, particularly crops like sugar cane and rubber (Carte et al., 2019). Two-thirds of Guatemala's land is held by only 2.5% of farms, leaving little land for almost half of the country to sustain themselves with rural, smallholder farming (USAID, 2010; Carte et al., 2019).

The seeds of these well-trodden migratory pathways away from Central America were planted decades ago, with neoliberal economic policies, resource, and land inequality. The changing climate, civilian-targeted gang violence, and the fallout of civil wars accelerated the dynamic that has left millions displaced (Carte et al., 2019). With climate change serving as a threat multiplier for existing issues in the region – and in countries across Latin American and the world – increased migration is a very real consequence of environmental degradation and climate change that the international community must consider when laying future plans and strategies.

This chapter will analyze the ongoing and likely future of environmental migration in Latin America. Section 2 begins with a discussion of the drivers, scope, and

impacts of environmental migration, and then dive into original research on environmental conflict in Latin America that has the potential to catalyze migration. Section 3 lays out the history of the refugee regime, from the 1800s through the present day, along with international laws and cooperation mechanisms to address refugee flows. As for Sect. 4, it presents four potentially interlocking options for cooperation and compromise for future environmental migration pathways in Latin America and will advocate for a potential path forward based on a regional approach. Section 5 concludes with an assertion that compassion is the most important precondition for establishing successful plans for potential environmental migration pathways.

## 2 Environmental Migration, Now and in the Future

The International Office of Migration (IOM) estimates that by 2050, between 25 million and 1 billion people globally could be displaced by extreme weather events, landscape degradation, and the environmental impacts of climate change (Bassetti, 2019; IOM, 2009). A common prediction is that 200 million people are predicted to migrate due to environmental pressures by 2050 – or one out of every forty-five people (IOM, 2009; McMichael et al., 2012). This figure includes individuals who may be displaced across international borders or to another area within their country of origin (Bassetti, 2019). The majority of current environmental migration patterns are internal to states, but it is highly probable that migration to neighboring or far-flung states will likely become more of a norm in the coming decades (Cristiani et al., 2020). Latin America, sub-Saharan Africa, and Southeast Asia will likely produce 143 million environmentally displaced persons by 2050 (Kumari Rigaud et al., 2018). Approximately one-third (around 23 million people) of the 68.5 million people who were forcibly displaced in 2017 were displaced because of hazardous environmental conditions (Podesta, 2019). As the effects of climate change and environmental degradation become more intimately experienced by individuals, migration to climates or areas perceived to be safer is likely to follow, in most cases as the last adaptation strategy.

Environmentally displaced persons (EDPs), as these migrants will be referred to in this chapter, are people who are compelled to leave their homes in either the short- or the long-term because of an environmental hazard that affects their livelihoods, health, or physical safety. The term 'environmental refugees' or 'climate change refugees' has also been used since the 1970s to refer to, legitimize the study of, and raise awareness of environmentally displaced persons (Morrissey, 2012; Keyes, 2018). The concern about the potential increase of environmental migration has been recently raised because it has generally been framed as "a security issue for rich countries supposedly threatened with a flood of 'environmental refugees' from the South" (Boas, 2015 in Piguet et al., 2018: 3). For this reason, the term 'environmentally displaced persons' will be used instead of the more controversial 'environmental refugees'.

Critics, like Keyes (2018), have rightfully pointed out that it is difficult, and can be problematic, to untangle the reasons behind why certain populations choose to migrate. The term 'environmentally displaced persons' captures equally "the wealthy family selling frequently flooded property in South Carolina to move away from the coast, and the poor family who has to abandon land that is no longer arable in Niger and move to the capital in search of a livelihood" (Ibid: 3). Movements – which may be voluntary, compelled, for short-term gains, permanent, in the distant future, inside a country, and across international borders – are all included in the definition of environmental migration (Ibid). There have been very few concrete cases of long-term forced migration for purely environmental reasons, without taking into account economic or social reasons – the clearest case study is of several Pacific Islands that are slowly sinking into the ocean (Podesta, 2019). While many other case studies have been cited in which environmental factors primarily or potentially drive out-migration, there are almost always other reasons that migrants could identify as primary to their decision (Ibid). Like in the Central America example, insufficient land access, food insecurity, and loss of livelihoods for fishermen and farmers may be top-of-mind concerns for those emigrating, even though all of those reasons are affected or driven by degrading environmental conditions (Markham, 2019). When discussing migration from Central America to the United States, a Guatemalan forestry expert told a New Yorker reporter that "There are always a lot of reasons why people migrate…Maybe a family member is sick. Maybe they are trying to make up for losses from the previous year. But in every situation, it has something to do with climate change" (Blitzer, 2019: n.p.).

## *2.1 How Environmental Degradation Results in Displacement*

Environmental vulnerability includes physical, economic, political, and social factors that affect people at the individual, local, and national levels. The environmental vulnerability affects rural communities more directly than city-dwellers, thus rural individuals make up the largest proportion of environmental migrants (Marshall, 2016). Behavior in the face of environmental vulnerability is correlated with the spatial area, as individuals from rural communities tend to move within a country or region, while city-dwellers move to farther, more desirable destinations (Mezdour et al., 2016). While environmental variability incentivizes moving, poor individuals without far-flung social connections may be unable to move or migrate (Black et al., 2001). Migration allows risk-takers the chance to have, but is no guarantee of, a better future.

Climate change and environmental degradation can compel migration along with two intertwined timelines – rapid-onset events and slow-onset events. Rapid-onset events include acute natural disasters such as hurricanes, tsunamis, or wildfires that tend to be discrete and occur over a short period (UNFCCC, 2012; Desai et al., 2018). The United Nations (UN) estimates that about 1.6 billion people "have lost their homes or livelihoods or have suffered other damage" since between 2000 and

2006 due to rapid-onset events, "which continues an upward trend over the past several decades and represents a four-fold annual increase, on average, from the decade of the 1970s" (Schwartz, 2006: n.p.). Slow-onset events, like sea level rise, land degradation, desertification, and stresses to the water supply, tend to erode the living conditions for people in an area over time to a degree that it is no longer possible to stay in such an area, thus driving out-migration (UNFCCC, n.d.; Warner, 2010). Unaddressed slow-onset events can create the underlying conditions for rapid-onset events: for instance, it could happen when gradual sea-level rise eventually floods houses situated along the shore, and leave communities vulnerable to other types of disasters as they recover from a natural disaster (Desai et al., 2018) (Box 5.1).

**Box 5.1: Case Study – Natural Disasters in Latin America**

According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2020), Latin America is the second most disaster-prone global region after Asia. Between 2004 and 2019, 73% of the 124 short-term surge deployments by OCHA's Regional Office for Latin American and the Caribbean (ROLAC) were due to natural disasters. ROLAC has also deployed 33 times since 2015 in response to migration – notably to Venezuelan migration throughout the region – and/or political unrest. Between 2000 and 2019, 152 million people in Latin America were personally affected by the 1205 disasters that occurred in the region (OCHA, 2020). Natural disasters are highly correlated with migration displacement: for example, around 100,000 people moved from Haiti to South America following the 2010 Haitian earthquake, and flooding displaced people across international borders from Colombia to Ecuador and from Bolivia to Brazil (Cristiani et al., 2020). Brazil is also on the list of the top 20 countries to have the highest number of displaced people due to natural disasters in the period from 2008 to 2014 (Cristiani et al., 2020).

Floods are the most common natural disaster in Latin America, with 548 floods between 2000 and 2019, followed by storms and hurricanes (330), earthquakes (75), droughts (74), landslides (66), extreme temperatures (50), volcanic events (38), and wildfires (24) (OCHA, 2020). Climatologic and meteorological threats are globally considered the deadliest and most economically impactful natural disasters (Gu, 2019). Droughts affected 53 million people in Latin America between 2000 and 2019, making them the disaster that affected the most Latin Americans in that period (Ibid). The 2018 drought season was particularly dangerous in Central America's "Dry Corridor" in parts of Guatemala, El Salvador, Honduras, and Nicaragua, as crop yields were reduced 50–75% and 2.2 million people were left food insecure (Ibid). Droughts are related to the El Niño phenomenon, while cooler weather and flooding tend to be associated with La Niña, global climate patterns that are caused by cyclical changes in the Pacific Ocean's temperature and last between 9 to 12 months (Ibid; NOAA, 2021).

The number of natural disasters has dramatically increased over the last half-century, much of which is due to climate change (Caruso, 2017). According to government estimates, natural disasters cost governments across the world an annual average of $901 million, especially because of damage to costly infrastructure – and

this is only likely to increase over the next century (Caruso, 2017). Twelve floods alone in the decade of the 2000s cost Latin American governments $1 billion in damages and all 548 floods in that decade affected 41 million people across Latin America (OCHA, 2020). It is estimated that flood damage, if flood risk remains constant, could reach upwards of $60 to 63 billion globally by 2050 (Gu, 2019). An economic analysis of risk to natural disasters by Gu (2019) found that Mexico City and Guadalajara, Mexico, Santiago, Chile, and Bogotá, Colombia were among the largest cities in the world with an outsized risk of mortality from natural disasters. Gu (2019) also found that the medium-sized Costa Rican cities of Alajuela and Heredia were two of the four world cities with the highest risk of large-scale economic losses from natural disasters. However, a study conducted in eight countries in Latin America in 2011 found that 60% of natural disasters between 1980 and 2010 happened in small cities with populations under 100,000 (UNISDR, 2011; Gu, 2019). As it is estimated that by 2030, 20–25% of urban population growth will be concentrated in smaller cities, it is essential to take into account risk and plan for resilience and vulnerability reduction in both megacities and smaller urban developments (United Nations, 2018; Gu, 2019).

Slow-onset events can also exacerbate and serve as a threat multiplier for violent conflict among communities (UNFCCC, 2012). For example, land degradation and desertification can result in a loss of livelihoods, which in turn can lead to conflict and displacement (UNFCCC, 2012; Desai et al., 2018). Percival and Homer-Dixon (2001: n.p.) identified three forms of environmental conflict:

- "Supply-induced scarcity is caused by the degradation and depletion of an environmental resource, for example, the erosion of cropland;
- "demand-induced scarcity results from population growth within a region or increased per capita consumption of a resource, either of which heightens the demand for the resource; and
- "structural scarcity arises from an unequal social distribution of a resource that concentrates it in the hands of relatively few people while the remaining population suffers from extreme shortage".

Commodity dependence is one facet of the 'resource curse' that tends to afflict natural resource-rich countries with low-income rates and worse development and democratic outcomes (Collier & Hoeffler, 2005; Raftopolous, 2017). The resource curse theory argues that "mineral and fuel abundance generates negative developmental outcomes in less developed countries" (Di John, 2011: 167). The link between commodity dependence and a higher propensity for conflict is strongly defined in the literature, although there is disagreement about the causal mechanism (Collier & Hoeffler, 2005). Economists argue that with poor economic indicators brought about by the 'resource curse', the opportunity costs of conflict are lowered and the potential spoils are more attractive (Ibid). Political scientists claim that the better explanation is that states that rely on commodities tend to be weak – they depend on patronage systems and do not bother to develop strong political and economic institutions and maintain the rule of law (Collier & Hoeffler, 2005; Humphries, 2005). Humphries (2005) notes that while 'resource curse' countries are more likely

to experience conflict, the wars tend to be concluded more rapidly and with a higher likelihood for a decisive military victory than the average conflict because both sides (and often external actors) have economic interests tied to further exploitation of natural resources that cannot happen in the midst of conflict.

Environmental conflicts can also range in scale, from interpersonal conflict among individuals to international wars (Temper et al., 2015). For example, water scarcity and increasing natural resource scarcity were direct drivers of deteriorating economic conditions in Syria, which in turn led to the devastating Syrian civil war and migration flows to Europe (Gleick, 2014). The relevance of even small-scale environmental conflict to broader topics of security and international conflict is that a spark can ignite from a seemingly isolated incident that drives out-migration from the region and can destabilize a country or region. As Navas et al. (2018: 1) point out, "the common understanding of violence in environmental conflicts as a direct event in time and space is only the tip of the iceberg…violence can reach not only environmental defenders, but also communities, nature, and the sustainability of their relations".

## *2.2 Methodology*

Original research by the author, conducted in 2020 for a master's dissertation from the London School of Economics, focused on the potential for environmental degradation in 26 Latin American countries to provoke or intensify existing environmental conflicts by 2075. The method applied to attempt to predict future environmental conflict was a machine learning approach called random forest analysis. At their core, machine learning algorithms employ computers to identify patterns in a data sample, and either describe the patterns or make predictions about how the existing patterns may influence future patterns. Random forest analysis is a method of predictive modeling that has seen a growing array of applications in recent years within the field of political science, and specifically in conflict modeling. Three separate climate change adaptation and mitigation scenarios were analyzed for all of the countries included in the maps, in order to show the effect of climate change mitigation policies on environmental conflict outcomes.

The final product of the machine learning algorithm was a series of heatmaps, made in a free geographical information software called QGIS, that depicted where and to what degree the algorithm predicted environmental conflicts would appear by 2075. Because of the density of points in the original environmental conflict dataset around the Andes mountain range, which stretches from Colombia down to Chile and Argentina, the majority of heatmaps displayed in this section predict the highest number of conflicts in this region. Specifically, southern Peru and northern Bolivia appear as major hotspots in every map, which means that the machine learning algorithm predicts the highest concentration and intensity of conflict in these regions. Across all of the heatmaps, the Andres region and particularly Peru and Bolivia, much of Mexico, and Patagonia in the Southern Cone emerge as the areas

most 'at risk' for environmental conflict by 2075, based on the methodology used in this dissertation.

The principal source for the research on Latin America, and the source of the original dataset, discussed below was the Global Atlas of Environmental Justice, which is a collaborative map that tracks historical and current environmental justice conflicts and was created and is moderated by staff at the Institute of Environmental Science and Technology (ICTA) at the Universitat Autonoma de Barcelona (Temper et al., 2015). Points are included when they meet the following conditions: (1) there is an economic, social, or political activity that has impacted or has the potential to negatively impact the environment and people in a defined area; (2) one or more environmental justice organizations are involved in documenting and/or opposing the activity; and (3) there are one or more reports in the media about the activity and the organizational or popular backlash (Temper et al., 2015).

## *2.3 Environmental Degradation and Conflict in Latin America*

Environmentally-driven conflicts tend to consist of "mobilizations by local communities [and/or] social movements…whereby environmental impacts are a key element of their grievances" and there is a potential for or impacts of negative environmental and social outcomes (Temper et al., 2015: n.p.). By this definition, environmental conflict mobilizations exist anywhere along a spectrum of intensity that ranges from complaints to government organizations about environmental impacts, to peaceful protests, to strikes, to blockades and land occupation, to outright massacres and wars (Ibid). Ten major forms of environmental conflict have historically affected or currently affect Latin America and are likely to drive environmental displacement in the future (Ibid):

- *Biodiversity Conservation:* The loss of biodiversity can affect the world in perpetuity, especially with the loss of keystone species. Biodiversity decline is of critical importance in Latin America as climates change – biodiversity losses exceed the limits of planetary sustainability more than any other human impact (Rockström et al., 2009; Young et al., 2010).
- *Biomass and Land:* Land (and land occupation) played a major role in Latin America's longest-running conflict – the Colombian conflict – and changing landscape patterns can be seen as a counter-insurgency policy (Albertus & Kaplan, 2012; Suarez et al., 2018). Roughly thirty-five of the world's fertile biomes have been already converted to agricultural land, and deforestation is Latin America's most important land change trend – it can have immense impacts on water quantity and quality and biodiversity (Grau & Aide, 2008).
- *Fossil Fuel and Climate Justice/Energy:* Fossil fuel reliance is a massive catalyst of climate change, and fossil fuels are non-renewable and unsustainable in the long term and could contribute to conflict as the Earth gets more polluted and some countries rush to place blame on others (Rockström et al., 2009).

- *Infrastructure and the Built Environment:* As Latin America urbanizes in the next decades, up to a projected level of 90%, rapid, unsustainable infrastructure development will likely become more common (Paranagua, 2012). It is estimated that globally by 2050, there will be enough paved roads to loop around the world 600 times (Laurance et al., 2015).
- *Industry and Utilities:* Industrial processes can affect water quality and natural resource availability downstream (like dyes from textile manufacturing getting into the water supply). The heavy industry tends to be clustered in coastal areas, potentially affecting coastal biodiversity (Dixon et al., 2013).
- *Mineral Ores and Building Materials Extraction:* These materials are usually non-renewable resources, and their extraction is hard on the environment and those who live near mines. Extraction sites as extraction tend to generate vast quantities of toxic or harmful waste materials that can get into the water supply and food chains (Kossoff et al., 2014; Raftopolous, 2017).
- *Nuclear Energy:* Nuclear energy currently provides 13% of global energy, but challenges in expanding nuclear energy remain, which could lead to further minerals exploration and extraction (Zinkle & Was, 2013).
- *Tourism and Recreation:* Mass tourism can severely impact the economy and natural resource allocation of a region (Navas et al., 2018).
- *Waste Management:* Waste Management conflicts tend to affect a small area, although there can be widespread issues if toxic or harmful waste, often from even common materials like plastics, seeps into the water supply.
- *Water Resources:* As water resources dwindle in quantity and quality across Latin America (and the world), it is hard to overstate their likely importance to future conflicts. Agriculture, mining, industry, energy, etc. corporations continue to contaminate water resources, ignoring indigenous people and rural landholder protests, as climate change accelerates and formerly snow-capped landscapes in Patagonia and the Andes melt (Boelens et al., 2011). A worrying example is in Colombia, where the rare páramo ecosystem provides 70% of the water to the country and is under constant pressure from mining companies and ranching encroachment (Andrasko, 2019; Alonso et al., 2020) (Box 5.2).

**Box 5.2: Case Study – The Potential for Water Depletion in Colombia's Páramos**

Dubbed the "land of mist" by Spanish conquerors when they first encountered the unique high-altitude, tropical moors, páramos are located above the tree line but below the snow line and are considered one of the world's most important ecosystems (Altenhenne, 2015). In total, 35,770 square kilometers of páramos exist in only four Andean countries – Peru, Venezuela, Colombia, and Ecuador – and Colombia contains half of all páramos in the world (IUCN, 2010; Altenhenne, 2015). Colombia's páramos provide water that supports up to 70% of the country's population, including those who live hundreds of kilometers from the páramos (WWF, 2017). Due to their rich and highly endemic plant life, particularly a wide variety of mosses and shrubs, páramos act like sponges to store water, which makes them especially valuable for the provision of water-related ecosystem services

(Schmidt-Mumm & Vargas Ríos, 2012). They also capture an estimated 1000 tons of carbon dioxide per hectare in their rich soils and contribute to the mitigation of climate change – an ecosystem service that is disrupted when the soil is disturbed for productive activities like agriculture (WWF, 2018). Páramos are among the world's most vulnerable and fastest-evolving ecosystems, due to pressures from people and their high degree of sensitivity to climate change, particularly warming weather (IUCN, 2010; Diazgranados & Barber, 2017).

Some people who traditionally resided near but not in the páramos have, over the last decades, moved to higher altitudes to escape the heavy industry and armed conflict during Colombia's 50-year civil war and, in doing so, have inadvertently caused further damage to the delicate ecosystems (UK Research and Innovation, n.d.). Deforestation increasing throughout the country by 44% in 2017 alone, along with expanding land-grabs and illegal mining, are worrying trends (Steffens, 2018a, b). Around the páramos, mining, fracking, and the environmental degradation of their traditional agricultural land have challenged the traditional way of life for inhabitants (UK Research and Innovation, n.d.). Human encroachment, unsustainable land use, improper cleaning of wastewater, and other environmental pressures stemming from the increased use of the páramos are hindering the ability of these delicate ecosystems to provide essential ecosystem services (Siltar, 2015). Most of these negative environmental consequences occur in rural areas that lie far outside the direct control of the Colombian government (Steffens, 2018a, b).

Currently, in an effort to protect them, 36 of Colombia's total 37 páramos have been delimited and made into national protected areas (MinAmbiente, 2018). The controversial Ley 99 (1993) and Ley 233 (2018) delimit the páramos and ban agriculture and livestock-holding and other life-sustaining activities like hunting and chopping trees to produce charcoal (El Tiempo, 2018; International Conservation Caucus Foundation, 2018; MinAmbiente, 2018). This breeds resentment between páramo-dwellers and national and local governments, but also engenders conflict within communities, in which most members see both a need to protect the delicate landscape and to exploit it (to whatever degree) to survive. With the increased pressure on the páramos and on páramo-dwellers stemming from laws and regulations meant to protect the páramos, it is likely that Colombia will experience internal migration away from the páramos. This trend will likely lead to increased urbanization across Colombia – however, if Cresso et al.'s (2020) simulations are correct, Bogotá's current population of nearly eight million people and other urban centers in Colombia may see dramatically decreased water security. If Colombia's major cities no longer have a source of clean, accessible water, future migratory flows away from Colombia or to other areas within Colombia are more likely.

Figure 5.1 depicts the geographical extent of conflict points included in the Atlas, with the categories depicted as different colors – for example, orange points identify conflicts over Mineral Ores and Building Extractions, which is the category with the most conflict globally.

Conflict is most common in rural areas (66.7%) and least common in urban areas (13.73%), even though Latin America is the most urbanized of any continent (81% of the population live in urban areas) (World Bank, 2020). As shown in Fig. 5.2,

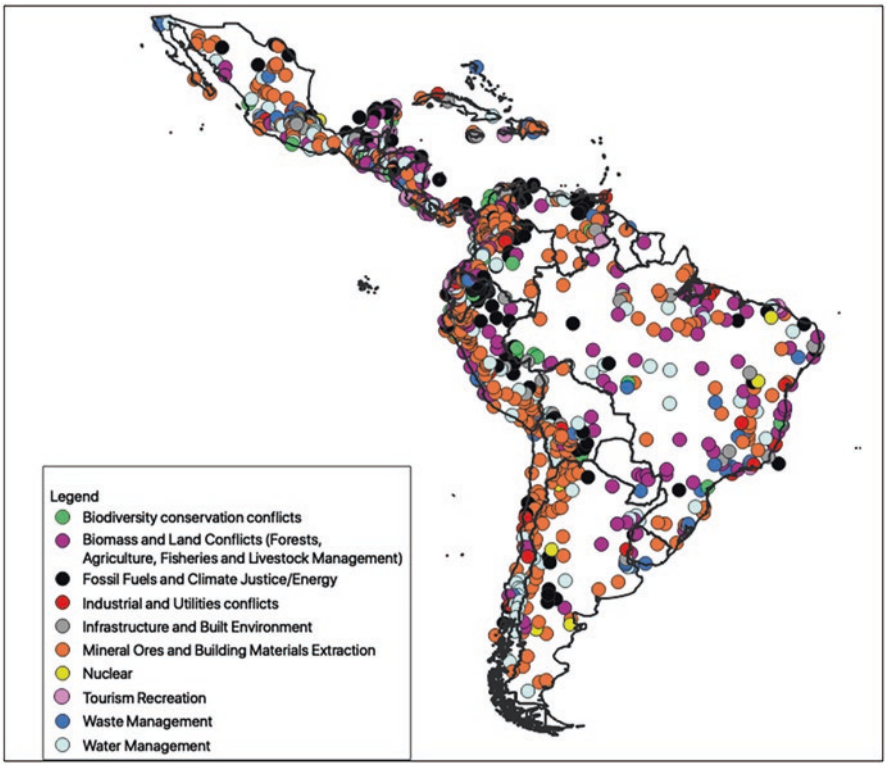


**Fig. 5.1** Extent and distribution of conflict points in Latin America. (Source: Adapted from Temper et al., 2015)

2011 was the year in which the number of environmental conflicts peaked and conflicts have seen a precipitous decline since then, but this might be due to long-running but relatively recent conflicts getting recorded in the Atlas at higher rates.

Environmental conflicts situated in small countries like the Bahamas and Belize are on average 29.6% likely to have a positive outcome, compared to 17.5% in large countries. A positive outcome for environmental conflict included in the Atlas would be when the harmful activity is stopped or meaningfully mitigated and the protestors achieve at least the majority of their demands, without any major backlash to the protestors and social groups involved in the conflict. Caribbean countries have the highest likelihood of a positive outcome at 45.8%, countries in Central America and Mexico have a 26.2% chance of a positive outcome, and South American countries have a 16.1% chance. 42% of conflicts over land are medium-intensity and 38.3% are high-intensity, and a small majority of water conflicts are medium-intensity.

Across all 26 Latin American countries included in the analysis, land is the most contentious 'commodity' (27.9% of conflict points mention land), followed by water (22.1%), gold (20.1%), and electricity (15.5%). Rounding out the ten most

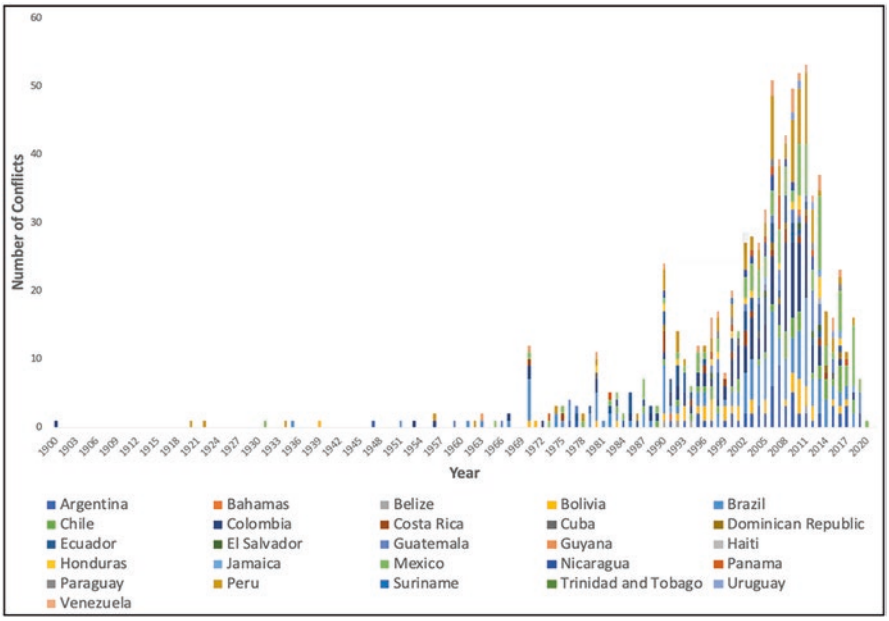


**Fig. 5.2** Temporal distribution of Atlas conflicts. (Source: Adapted from Temper et al., 2015)

contentious commodities is silver, crude oil, copper, timber, domestic municipal waste, and natural gas. At least one other country is involved in 74.9% of environmental conflicts in the Atlas, especially in extractive conflicts. Canada is the country most commonly involved in conflicts and is particularly invested in high-conflict mining in Latin America; it is followed by the United States, Spain, China, Brazil, and the United Kingdom. While most of the environmental conflicts recorded in the Atlas involve extranational companies or states, the majority of extractive activities in some areas in Latin America are small scale or artisanal in nature, particularly for gold mining (Walter, 2016).

According to the Atlas, the social groups most commonly involved in environmental conflicts in Latin America are, in order: local environmental justice organizations; neighbors/communities; indigenous groups or traditional communities; social movements; and farmers. Of those five groups, farmers are marginally less likely to win positive outcomes from conflict in Latin America. Street protests/marches, official complaint letters and petitions, public campaigns, development of a network/collective action, and lawsuits/court cases/judicial activism are the most common forms of mobilization. While violent forms of mobilization like hunger strikes and self-immolation, threats to use arms, and kidnappings were each present in less than 1% of conflicts, conflict outcomes (which tend to refer to how those causing environmental degradation respond to mobilizations) were bloodier. Violent targeting of activists appeared in 6% of conflicts and murders or assassinations occurred in 0.05% of conflicts. Repression, corruption, and migration/displacement

appeared frequently as well. More optimistically, the most common outcomes were the application of existing regulations and the strengthening of participation (among activists).

Judging by the historical trends for environmental conflict and projections for climate change in Latin America, it seems clear that environmental displacement will only grow in scale and importance by the end of this century. Ultimately, environmental conflict and displacement are about people – how people choose to prioritize and allocate ever-depleting resources and how people make decisions when faced with an unsatisfactory environmental outcome.

## 3 Historical and Theoretical Underpinnings of the Modern Refugee System

The current international law does not provide adequate protection to environmentally displaced persons (Betts, 2010). As is discussed throughout this chapter, the gap between the established definition of who can receive protection as a refugee, and the looming threat of environmentally driven displacement, is growing ever-wider (Ibid). This section sets the stage for further discussion of how environmental migration flows should be managed in the future in Latin America, by first discussing the theoretical foundations of the refugee regime, then by detailing the early history of refugee protection prior to World War II. The discussion then turns to how the current international refugee regime was established post-World War II.

### *3.1 Foundations of the Refugee Regime*

The key building block and reference point of the current international system is the state. In a 1919 lecture, "Politics as a Vocation", German sociologist Max Weber famously declared that "a state is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory" (Weber, 1919: 1). States in the current Westphalian international system have 'prima facie' jurisdiction over their territory, which delineate physical space in which a certain set of laws apply (Goodwin-Gill, 2014). With borders comes a legally upheld definition of an 'other' – people who were born or live outside the state's territorial control (Motomura, 2020). As Motomura (2020: 471–472) astutely notes in reference to the United States, many liberal democracies have an inherent conflict between a general "belief in the equality and dignity of people…[and] the fundamental and intended effect of the national borders-to divide 'us' from 'them'".

National immigration laws serve as the legal architecture around which states can enforce their concept of borders (Goodwin-Gill, 2014; Motomura, 2020). States can choose which non-citizens they are willing to legally accept into their territory

and which are forced to depart (Goodwin-Gill, 2014). States are also able, to a lesser extent, to control some migratory movement outside their borders, through interceptions and redirection of migrants clearly intending to cross into their country, especially in the sea (Goodwin-Gill, 2014; Benhabib, 2020). Additional methods to deter migration include administrative detention upon arrival, visa controls, and a constricting definition of who is a refugee and entitled to resources and who is not (Edwards, 2005; Echeverría, 2020). These sovereign rights are monitored and contained by international legal structures and treaties. States that are voluntarily party to Refugee Conventions (discussed later in the chapter) are pressured by soft international law to provide at least a minimal level of material assistance for refugees who end up inside their borders (Goodwin-Gill, 2014; Kaldor Centre, 2020) (Box 5.3).

**Box 5.3: Case Study – Migration in Haiti and the Dominican Republic**

Haiti and the Dominican Republic (DR) represent a 'natural experiment' in which to study EDM, as the countries share the island of Hispaniola in the Caribbean. From colonial times until 1960, Haiti and the DR seemed to be moving along the same trajectory, first as resource-rich colonies then as unstable authoritarian states. France created a highly extractive sugarcane colony in Haiti using African slaves, while the Spanish invested less in the colony that became the DR (Jaupart, 2018). Once Haitian slaves overthrew the French in 1804, they conquered their neighbors – during this period, Dominicans began to assert their identity as being distinct from Haitians due to their Hispanic roots, Catholicism, and Spanish language (Stoyan et al., 2016).

Unstable military dictators and American intervention plagued both sides of the island for more than a century until 1960, after which there has been a clear divergence between Haiti and the DR's relative trajectories. In 1960, the countries shared a real GDP per capita of $800, but by 2005, Haiti's real GDP per capita fell to $430 while the DR's jumped to $2500. Haiti's economy during the same period grew a paltry 1% per year as the country experienced decades of violent authoritarian rule, while the DR began a process of irregular democratization and outperformed the majority of Latin American nations, with a growth rate of 5% (Jaramillo and Sancak, 2009). This is not to suggest that democratization alone brought about economic stability – rather, the DR's structural and stabilization policies were market-friendly and reinforced stability, while Haiti experienced political volatility that did not encourage growth (Jaupart, 2018). The disparity in economic circumstances right across the porous border constitutes a major 'pull factor' for Haitian migrants.

While both countries are suffering from climate change impacts, Haiti is more vulnerable due to its poor infrastructure, weak government, history of environmental degradation, and poverty-stricken populace (Alscher, 2011). Natural disasters like hurricanes and earthquakes are worsened in severity by overcrowding, deforestation, wetland destruction, and climate change, all of which have human components (Singh & Cohen, 2014). Deforestation encourages short-term migration by reducing environmental resilience to natural disasters and forcing people to cross the Dominican border to search for fuel in Dominican forests (Amin & Goldstein,

2008). Haiti is particularly vulnerable to flooding, as hurricane-force rains run rapidly across the deforested landscape into fields, which contributes to soil erosion, driving crop failure, and increasing food prices (Singh & Cohen, 2014). This means that populations which previously relied on a particular crop, for example, may eventually not be able to grow it and find themselves with little food (Gioli et al., 2016). Lack of institutional capacity is another key decision driver for out-migration. Trust in the Haitian government plummeted after the 2010 earthquake and rebounded to levels far below the Latin American average (Stoyan et al., 2016). The Haitian government is unable to provide important social infrastructure like education for rural populations and secure employment opportunities. As of 2017, 14% of Haiti's total labor force was unemployed, with another 85% of the male and 90% of the female labor force engaged in vulnerable employment (World Bank, 2018). All of the variables mentioned are linked to poverty, which is a major driver of migration from Haiti.

Migration from Haiti to the DR already causes tensions and is likely to dramatically increase as Haiti is widely considered a 'hotspot' of EDM (Doran, 2011). A 2013 change of the Dominican Constitution rendered 100,000 Dominicans of Haitian descent stateless, which pushed thousands to migrate back to Haiti due to economic and social discrimination (Fendt, 2016). This cycle, of short-term migration to the Dominican Republic that becomes long-term migration, which is then penalized by the Dominican authorities, is likely to worsen over time as climate change impacts slam the island.

In the Weberian international system, states are obligated to protect and respond to the needs of people within their borders (Kozoll, 2004; Betts et al., 2012). This social contract breaks down when states are either incapable of protecting individuals or groups or are actively targeting them for certain immutable or protected characteristics like race and religion (Kozoll, 2004). Physical displacement outside of a country of origin is the primary indicator of vulnerability in a state-led international system, and humanitarian law is supposed to protect those individuals who reasonably decide to migrate in order to seek protection in other states (Kozoll, 2004; Betts et al., 2012). This is both because it is relatively easy to track and measure physical displacement and because people who have been forced to move are unlikely to be able to rely on their normal coping strategies to better their own circumstances (Betts et al., 2012). Refugees and forced migrants are generally likely to have left behind their communities, livelihoods, possessions, and, in many cases, language and culture (Ibid). If refugees, as noted Italian philosopher Giorgio Agamben (1998: 131) pointed out, "represent such a disquieting element in the order of the modern nation-state, this is above all because by breaking the continuity between man and citizen, nativity and nationality, they put the originary fiction of modern sovereignty in crisis".

## 3.2 Early History of Refugee Protection

International protection for refugees is not a new phenomenon – the precursor legal architecture for the current international protection system extends back to the 1800s. Charitable organizations focusing on supporting war efforts and aiding wounded troops began to be established in the nineteenth century, notably Florence Nightingale's work during the Crimean War (1853–1856) and the founding of the International Committee of the Red Cross in 1863 (Holborn, 1939; Hitchcock, 2014). The chaos brought by numerous European and Eurasian wars up to World War I "coincided with a growing sentimental view that civilized societies ought to respond to suffering with care and human kindness rather than indifference" (Hitchcock, 2014: 146). During this period, refugee camps became a viable option for population resettlement and control, notably during the South African War (1899–1902) (van Heyningen, 2010). The refugee camps exemplified a 'sentimental' view of the time that refugees and vulnerable populations should not be left to their own devices (Ibid).

World War I (1914–1918), the world's first example of an industrialized total war, produced four million refugees and resulted in a number of highly publicized humanitarian crises, like the 1914 Austrian and Hungarian invasion into East Prussia (De Vuyst, n.d.; Gatrell, 2008). Three key consequences of World War I shaped the modern refugee regime. First, the period after World War I was chaotic – several major empires fell, independence struggles raged, and national boundaries were reconfigured, often following ethnic lines, as a result of the war (Leonhard, 2018). Due to World War I and the conflicts that were initiated because of the end of such a war, the twentieth century became known as the 'century of the refugee', in that the scale of international forced migration surpassed all previous refugee flows (Myers, 2010). Secondly, since refugee flows came to be regarded as "an international problem, even a norm of the post-war order" during the twentieth century, people and governments warmed to the idea that large-scale social issues, like displacement from the war, required coordinated international responses (Burgess, 2016). The final consequence was the shift from a concept of charity, in providing primarily material support for war efforts and for the less fortunate within the boundaries of a state, towards a broader notion of human rights and humanitarianism that is inclusive, global, and applies in times of peace as well as times of war (De Vuyst, n.d.; Gatrell, 2008).

The League of Nations was established in 1919 as a component of the Treaty of Versailles, one of the peace treaties that formally ended World War I (Burgess, 2016). As the only supernational political authority capable of solving a problem which is beyond the power of exclusively humanitarian organizations, the League created a High Commission for Refugees to address population displacement and refugee flows, headed by the Norwegian Fridtjof Nansen (Holborn, 1939; Burgess, 2016). Nansen advocated for shifting international efforts away from short-term charity work towards promoting that refugees eventually become self-supporting and settled (Holborn, 1939; Heyward & Ödalen, 2013). Soon after Nansen's death

in 1930, the modest but important Refugee Convention (1933) was signed by fourteen countries, from which originated the principle of non-refoulement, safe labor conditions, welfare and relief, and exclusion from reciprocity (Holborn, 1939; Jaeger, 2001). Non-refoulement means that host states generally do not have the right to return individuals to their home states if they have a credible fear of persecution – it is one of the main theoretical foundations of the modern refugee regime (Jaeger, 2001; UNHCR, 2010).

During this period, the underpinnings for a firm international legal framework of protection for refugees were established, through treaties, resolutions, and other legal instruments (Jaeger, 2001). Generally, each legal document served to draw a new refugee population into international protection or expand protection to known populations. An example of this is the progressively expanded protection for refugees from Germany between 1936 and 1939, as 150,000 German Jews had fled by 1938, along with hundreds of thousands of Jews from other European countries (Jaeger, 2001; Kalb, 2015). The Évian Conference notably provided international protection for the first time to would-be refugees who had not yet left their home countries "but who must emigrate on account of their political opinions, religious beliefs or racial origin" (Jackson, 1999: 21). Ultimately, the Évian Conference failed to generate substantial material support beyond international goodwill – the tiny Dominican Republic was the only country willing to take in refugees at scale, committing to accepting 100,000 refugees (Kalb, 2015).

## *3.3 The Modern Refugee System*

World War II resulted in the largest refugee crisis the world has ever experienced. Contemplating after World War II, Holborn (1956: 210) wrote that "It is evident how difficult a task it was to select genuine refugees and displaced persons among the huge mass of uprooted humanity" (Ballinger, 2012). To rebuild the international system and cope with the one million refugees in Europe reeling from World War II, states founded the United Nations (UN) in 1945 (UNHCR, 2020). Former UN Secretary General Kofi Annan stated that the UN was "never intended to be a utopian exercise…it was meant to be a collective security system", building on American President and League of Nations founder Woodrow Wilson's hope that the League of Nations would bring "an organized common peace" (Schlichtmann, 2010).

Five years after the UN was founded, the UN High Commissioner for Refugees (UNHCR) was inaugurated in 1950 (UNHCR, n.d.). Like its precursor institutions such as the League of Nations, UNHCR was intended to fade once the European refugee crisis after World War II was resolved, optimistically assumed to be within three years (Betts et al., 2012; UNHCR, n.d.). The 1951 Refugee Convention Relating to the Status of Refugees (hereafter known as the '1951 Refugee Convention') is the key multilateral treaty that UNHCR is bound to uphold (Debergh Robinson, 2012). The 1951 Refugee Convention defines who is considered a legal

refugee – only those who meet the legal definition of a refugee are required to be protected under international law (UNHCR, 2010). The 1951 Refugee Convention is built on the principle of non-refoulement, which was laid out for the first time in the 1933 Refugee Convention (Jaeger, 2001). People who fall under UNHCR's mandate, as defined by the 1951 Convention, must meet four conditions: (1) they must have fled their home state by crossing an international border; (2) be unwilling or unable to return to their home state due to (3) a 'well-founded fear of persecution'; and (4) the persecution levied against them must be based on their membership in a distinct and often immutable group, like race, religion, nationality, or political opinion (Docherty & Giannini, 2009).

The first condition, that refugees are those who have crossed an international border, excludes people who meet all other conditions but were unable to cross an international border for some reason, often because of poverty, and are displaced within their home countries (Betts et al., 2012). Monitoring and protecting 'people in refugee-like situations' is one of the most difficult and enduring challenges that UNHCR faces, and protection for internally displaced people was only extended in recent years (Betts et al., 2012). The second condition, of being unwilling or unable to return, particularly applies to people who are functionally stateless because of their inability to return, even in the short term (Alexander & Simon, 2014).

The 'well-founded fear' clause included in the Convention assumes that political authorities in the country of origin are aware of and are actively oppressing or threatening the claimant because of the political opinion (Storey, 2014). This puts the burden of proof onto the asylum-seeker to prove to immigration authorities that their fears are real and life-threatening in order to gain protection (Anderson et al., 2020). Perceived credibility of the asylum-seeker by immigration authorities is often a key determinate for whether they are granted asylum or not and requires a future-focused assessment of risk (Anderson et al., 2020). However, Alexander and Simon (2014) take issue with this interpretation of the 'well-founded fear' clause. They argue that fear of retribution is not a central reason to accept or deny an asylum-seeker and instead the 'unable to return' clause is a more important determinant that should serve for refugee protection for those asylum-seekers that do meet it (Ibid). Finally, the clause on 'group membership' can be difficult to prove – for example, political asylum on the basis of persecution of gender expression or sexuality (Greenberg, 2017).

Additionally, the definition of refugees at the time was restricted to people who were directly affected by "events occurring before 1 January 1951", which mainly referred to events that affected Europeans or colonial subjects (Jackson, 1999). This reflects both the erroneous belief at the time that the refugee crisis was primarily contained inside Europe, and the negotiations among state delegates when writing the Convention about what groups of people to exclude from protection because of their perceived status as 'political' migrants or in order not to stretch resources (Ballinger, 2012; Debergh Robinson, 2012). In fact, the total number of forced migrants after World War II may have surpassed 175 million (Gatrell, 2000; Ballinger, 2012). To address the needs of refugees not included in the Convention, a variety of *ad hoc* stop-gap measures were developed, including Allied-run refugee

camps in Europe and India and Pakistan's bilateral treaties and legal instruments that regularized resettlement options for the 14 million forced migrants across the newly established border (Cohen, 2008; Debergh Robinson, 2012).

The 1951 Refugee Convention was extended to include protection for refugees outside of Europe with the Protocol relating to the Status of Refugees, signed in 1967 (Stone, 2018). The 1967 Protocol reaffirmed the conditions under which people can be considered refugees but removed its geographical and time-based limitations so the Convention could be universally applied (Hong, 2001). Any country that ratifies the 1967 Protocol is also explicitly agreeing to abide by the tenets of the 1951 Convention, as stated in Article 1 of the Protocol (Kaldor Centre, 2020). By the second half of the twentieth century, less-industrialized countries began to take up more space in UNHCR's mandate (Crisp, 2001). In the 1960s, UNHCR began to link the long-term goal of refugee resettlement with short-term development funding, "with its potential as a win-win situation for donors and asylum states and, in theory at least, for refugees as well" (Krause, 2016): 51. Refugees were viewed by UNHCR and other development agencies, at this time, as a bargaining chip that could be leveraged to plan for and promote sustainable development in the (often low-income) receiver countries, instead of as a burden to be solved (Glasman, 2017). Around the same time, UNHCR began to develop standard responses to address large-scale refugee flows in low-income regions, particularly in Africa (Crisp, 2001; Krause, 2016).

Figure 5.3 tracks the number of total refugees that were included until UNHCR's mandate and those outside UNHCR's mandate that were kept track of but did not meet the legal definition of refugees at that time. Note that the 'Internally Displaced

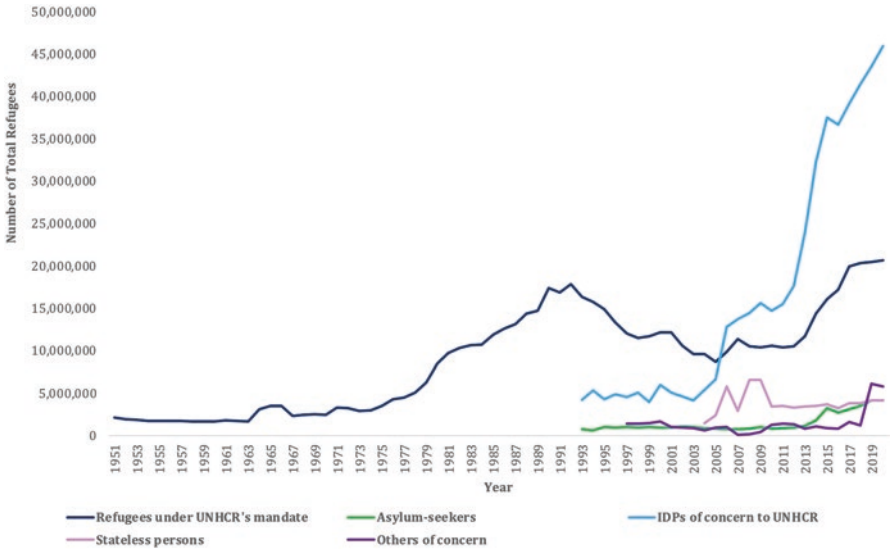


**Fig. 5.3** Refugees and persons of concern from 1951 to 2020. (Source: Adapted from UNHCR, 2020)

People (IDPs) of concern to UNHCR', which makes up for the highest percentage of people of concern in recent years, meet many of the criteria to be considered a refugee, but have not crossed an international border.

The three durable solutions that UNHCR currently promotes are voluntary repatriation, local integration, and resettlement (UNHCR, 2021). Practically, voluntary repatriation can be highly risky to individuals returning to unstable and often unknown situations, and UNHCR's website acknowledges that less than 1% of total refugees of concern are submitted for resettlement in a country outside their country of origin (UNHCR, 2021a). Additionally, local integration is rarely a feasible option, especially for refugees in lower-income host countries – Egypt, for example, has passed a number of policies to limit refugee access to basic social services, including employment and education (Brun & Fábos, 2017). For the millions of refugees who are both under UNHCR's mandate and legal care and are not eligible for or have not accessed any of the three durable solutions of choice, most reside in camps (Turner, 2016). This includes short-term environmental migrants fleeing natural disasters, and people who have crossed international borders to avoid years-long civil wars in their home countries (Ibid). Refugees in camps are caught in a cruel contradiction: "first, they cannot settle where they are because they are supposedly 'on the move', on their way home or somewhere else in the future; second, they cannot remain 'on the move' as they possibly are not going anywhere, either now or in the near future" (Ibid: 4). Refugee camps are intended to be temporary solutions to temporary emergencies, but often cross over to long-term displacement (Ibid).

Long-term displacement, often in these camps, is the "new normal" and these durable solution options "are increasingly unsuitable for offering social, economic and cultural means for refugees to rebuild their lives and livelihoods" (Brun & Fábos, 2017: 1). Ironically, with a new buzzword and best practice defining each decade, and solutions that were designed to be temporary turning into decades-long fixtures, the search for truly durable, compassionate solutions remains unaddressed, such as Palestinians trapped in refugee camps in the Middle East.

## *3.4 Provisions for Environmentally Displaced People*

UNHCR has also taken halting steps towards acknowledging EDPs but has yet to seek durable solutions. When applied to EDPs who flee across international borders, the 1951 Refugee Convention and its extension documents have major gaps (Williams, 2008). The Refugee Conventions were designed to address social and political persecution by governments or non-state actors, so most EDPs will only meet the first two conditions for being considered a refugee under the 1951 Convention (Ibid). With the burden of proof put on those applying for protection, it is difficult for EDPs to prove intent on the part of their governments or non-state actors (UNHCR, 1998).

Generally, environmental destruction affects people bound together by geography or living conditions, and thus would have an outsized effect on those living in unsafe locations due to poverty or close to natural features vulnerable to disasters or climate change, regardless of ethnic identity or political opinion (Höing & Razzaque, 2012). However, cases in which social groups were purposely induced to environmentally driven displacement (EDD) contradict the assumption that poverty and natural disasters are necessarily linked, like the Iraqi government in the 1990s methodically destroying marshes and possibly deliberately poisoning the water resources around which the Iraqi Marsh Arabs built their livelihoods and culture (King, 2006). Existing case studies like that of the Marsh Arabs constitute legal openings that could be exploited to provide for EDPs and fill existing gaps in protection (Kozoll, 2004) (Box 5.4).

**Box 5.4: Case Study: Iraqi Marsh Arabs**

The Ma'dan, also called the Marsh Arabs, are an ethnic group that primarily dwells in the Tigris-Euphrates marshlands in Iraq and Hawizeh marshes that overlap the border between Iraq and Iran in an area nearly the size of Wales (Adriansen, 2004; Priestley, 2020). Their unique culture is claimed to be descended from ancient Sumerian society and the majority of the Ma'dan are Shi'a Muslims (Adriansen, 2004). Much of the Ma'dan's livelihood was based on buffalo breeding, fishing, and rice cultivation, and swamp reeds formed the structures of their houses (Adriansen, 2004; Al Ahram, 2015a).

Until World War I, the Ma'dan lived in relative isolation from the rest of Iraqi society, as the marshes themselves provided an area outside of state control, despite weak ties to markets in towns adjacent to the marshes and some advancement into the swamps by Ottoman and British surveyors and militaries starting in the 1860s (Adriansen, 2004; Al Ahram, 2015a). By the 1920s and 1930s, the marshes and their dwellers had become targets of regular British air-bombing campaigns, following a 1920 tribal uprising (Al Ahram, 2015a). The water in some areas of the marshes had become undrinkable and many marsh-dwellers had left for nearby cities by the 1970s, following campaigns between the 1930s and 1970s to combat malaria by introducing pesticides, the introduction of invasive species for aquaculture, water salinization, and increased inequality resulting from a British policy of converting public land to shayks' private holdings in order to promote stability in these 'ungovernable' areas (Al Ahram, 2015a). In the cities, the Ma'dan were viewed with a mix of contempt and apprehension for their 'backward' nature (Adriansen, 2004; Al Ahram, 2015a).

All of these tensions came to a head with the Iranian Revolution in 1979, Iraq's war with Iran (1980–1988), and the Gulf War (1990–1991). The marshes proved to be forbidding places in which to wage war and served as key battlefields, particularly in the Iran-Iraq War, and also hosted groups of deserters (Adriansen, 2004; Al Ahram, 2015b). Within the context of these conflicts, the marshes became viewed as potentially dangerous, rather than a place that 'required' development (Ahram, 2015a). Iraq began to deport the Ma'dan population from the swamps in 1983, with the hope of developing oil resources in the marshes, promoting modern agriculture

rather than the Ma'dan's traditional practices, and, primarily, wiping out the Ma'dan's culture (Ahram, 2015a). This policy resulted in more than 500 arrests and about 200 deaths within the first several days (Al Ahram, 2015a, b; Priestley, 2020). In March 1991, an uprising against President Saddam Hussein of Iraq was brutally crushed, and just weeks later, Hussein issued orders in late March 1991 to drain the swamps (Al Ahram, 2015b). These orders turned into a counterinsurgency campaign of genocidal actions against the Ma'dan and their marshes, including forced disappearances, torture, and executions for people and poisoning the marsh and burning reed-beds to kill off the ecosystem (Priestley, 2020). Two years later, between two-thirds and 90% of the original marsh area were completely dried out and 200,000 were displaced (Al Ahram, 2015b; Priestley, 2020).

Several decades later, there remains debate about how deliberate the policies against the Ma'dan were and whether the narrative of genocide and 'ecocide' was pushed for political reasons. Priestley (2020) and Al Ahram (2015a) both rightly point out that while the flashpoint for the more obvious genocidal actions was in 1991, the structural underpinnings of ecological degradation over centuries, under the guise of development, had been conducted by the Ottomans, British, and Iraqi governments. Adriansen (2004) reveals that few in the international community were paying attention to the plight of the Ma'dan until 2002–2003, when the narrative shifted from ecological destruction to a humanitarian justification made by the United States for invading Iraq.

As far back as 1993, UNHCR recognized four legitimate reasons for fleeing – political persecution, economic pressures, ethnic conflict, and environmental destruction (Höing & Razzaque, 2012). UNHCR dodged participating in policy or research work on EDD until 2007, as then-High Commissioner Antonio Guterres regarded EDPs as falling outside UNHCR's bounds (Ibid). In 2007, however, Guterres first gave a speech in front of donor states that linked climate change and displacement, which signaled a shift in the agency's position towards including EDD in its worldview, without taking exclusive responsibility for the issue (Hall, 2013; McAdam, 2014). By 2011, there was faint hope that "states would be favorable to an involvement of UNHCR in addressing protection gaps related to cross-border displacement as a result of natural disaster and climate change-induced displacement" (Hall, 2013: 100).

Policy instruments have been slightly ahead of hard international law in recognizing the plight of EDPs. For example, a clause in the Cancún Outcome Agreement, which was adopted in 2010, specifically characterized EDD and migration as a whole as an adaptation option available to individuals but avoids sticky questions of causality and accountability (McAdam, 2014). Previously, EDD was seen as a failure to adapt to changing circumstances, so the Cancún Outcome Agreement represented a policy shift (Sasser, 2010). The Nansen Protection Initiative and the Cancun Climate Change Adaptation Framework acknowledge this, stating that migration refers to:

> Human movements that are predominantly voluntary insofar as people, while not necessarily having the ability to decide in complete freedom, still possess the ability to choose between different realistic options. In the context of slow-onset natural hazards,

> environmental degradation and the long-term impacts of climate change, such migration is often used to cope with, 'avoid or adjust to' deteriorating environmental conditions that could otherwise result in a humanitarian crisis and displacement in the future. (Desai et al., 2018, p. 4)

Launched in 2012 and building on the Cancún Outcome Agreement, the Nansen Initiative identified appropriate humanitarian responses to environmental degradation, based on three pillars – international cooperation, consistent standards for how displaced people should be managed and treated, and operational concerns like funding mechanisms (Nansen Initiative, 2014). EDPs can potentially appeal to regional bodies for protection that UNHCR cannot provide, like the Cartagena Declaration and the Organization for African Unity Convention, but Keane (2004) argues that neither body recognizes migration as being solely caused by environmental reasons and, therefore, cannot offer adequate protection (Höing & Razzaque, 2012).

## 4 Policy Options to Address Existing Legal Gaps for Environmental Displacement

Because climate change defies simple solution-building, due to the immense uncertainties, conflicts of interest among stakeholders, along with interdependencies inherent in its study and response, it is frequently known as a 'super-wicked' global problem (Behrman & Kent, 2018). Environmentally driven migration (EDM) is a separate but related 'super-wicked' issue, as it touches on numerous other issues, including economics, law, and emotional factors, including climate change and environmental vulnerability.

### *4.1 What Policies Must Consider*

Some policymakers and academics characterize EDM as a failure to adapt to changing circumstances, rather than as an adaptation option (Warner, 2010). Most national adaptation plans and policies currently fail to include migration and resettlement in their analyses and budgets, which is a major exclusion (Warner, 2010; Desai et al., 2018). A second complicating factor in durable solution planning for climate change risk is 'maladaptation'. Maladaptation refers to the perception that short-term solutions, like building a dike in a floodplain, encourage settlement patterns or behavior that actually increases long-term vulnerability (Oliver-Smith, 2009). This is relevant to climate change-driven migration because migrants may be trading one unstable living situation for another across a border (UNFCCC, 2012). There is little stopping governments from placing migrants in cheap, environmentally undesirable resettlement locations when selecting camp locations (Warner, 2010). Some

resettlement locations lack sufficient access to basic services like schools, water treatment, and banks (Dun, 2009). In making the decision to move, migrants often abandon established jobs and livelihoods and can lose time-honored social networks that link migrants to new job opportunities (Warner, 2010).

Long-term risk planning efforts must improve international and regional cooperation, capacity-building, and adaptive management of refugee resettlement programs, in order to address the reality of future environmental migration in an orderly manner (UNFCCC, 2012). Migration should be considered as a valid adaptation approach in the face of rapid-onset events and for lowering exposure to slow-onset events and should be included in climate change adaptation action plans (IOM, 2009; Desai et al., 2018). As Desai et al. (2018: 4) point out, there is often a "'tipping point' at which communities shift from voluntary, adaptive migration into forced displacement. When their coping capacities are exhausted, they risk falling into a gradual process of impoverishment, eventually leading to their displacement". Adaptive and forward-looking planning for environmental displacement is a way to avoid the anxiety, scrambling for funding sources, and sudden state of emergency in countries often associated with new refugee flows.

The human cost of migration is particularly clear in how host countries and citizens react to migrants when they arrive. One major setback in the preemptive planning for potential future patterns for environmental migration is the "tightening of the distinction between the citizen and the non-citizen" that has occurred around the world in recent years (Benhabib, 2020). The United States, for example, has been violating the international principle of non-refoulement in mistreating Latin American illegal immigrants along the U.S.-Mexico border in a clear nod to rising nationalist sentiments stoked during the Trump era (Motomura, 2020; Nyabola, 2019; Benhabib, 2020). These anxieties tend to be deeply held and not easily dispelled with evidence, even when faced with economic research that suggests that migration improves economic outcomes across the host society (Motomura, 2020). This trend is clear across both rich and poor host countries throughout all world regions (Benhabib, 2020).

## *4.2 Potential Policy Solutions*

Four potential – and possibly interlinking – solutions to long-term environmental migration challenges are feasible and foreseeable.

### 4.2.1 Extend Existing Documents

The first potential approach for how to manage future pathways of environmental migration advocates for UNHCR to extend the 1951 Convention to include EDPs or to liberally interpret existing documents (Höing & Razzaque, 2012). As António Guterres asserted, "the history of UNHCR is one of constant change and

adaptation" in response to emerging crises and challenges (Betts et al., 2012: xx). UNHCR's policy mandate has expanded to include returnees, stateless people, IDPs, asylum-seekers, and people 'threatened with displacement' as the need arose, so there is historical and legal precedent for folding new groups of people into UNHCR mandate (Hall, 2012; UNHCR, 2020). While the current iteration of the 1951 Convention and more recent UNHCR documents do not explicitly include EDPs in their definitions of refugees, they do indirectly have sway over the way in which migration is conceptualized (Höing & Razzaque, 2012). By extending the 1951 Convention and potentially other landmark documents, UNHCR would legitimize EDPs as 'worthy' of protection, resources, and attention.

Proponents of this approach argue that extending or liberally interpreting the current legal framework would be pragmatic, because rather than drafting entirely new legislation that would likely lack political will and funding from states, UNHCR could use its influence and expertise (Betts, 2012). Hall (2012) argues that over time, driven by Guterres, UNHCR has been incrementally positioning itself to "replicate its moral legitimacy in new spheres", like managing EDPs. One camp of detractors portrays UNHCR as being unwilling to take responsibility for EDPs, due to fears that states would be averse to being legally bound to take on more refugees and wary of eroding sovereignty (Williams, 2008; Höing & Razzaque, 2012). Another group views the 1951 Convention as too-narrowly defining refugees as people who have been persecuted, as they perceive modern-day forced migration to be more diffuse and less persecutory in nature (Fitzpatrick, 2010). The third set of critics cites the legitimate worry that adding more categories of refugees to existing Conventions would thin protections for refugees included in the original definition, who are themselves vulnerable (Renaud et al., 2007).

### 4.2.2 UNHCR Ad Hoc Extension

Perhaps the simplest potential response is *ad hoc* extension of UNHCR's mandate, most likely in the form of expanded temporary protection for EDPs. UNHCR is currently pursuing this option for the EDPs that have already chosen to migrate internationally, by providing some *ad hoc* aid without also affording these environmental migrants a clear legal status or designation (Betts, 2010). Recognition for EDPs could exist along a sliding scale from acute to chronic displacement, which would allow for maximum flexibility in states' response options (Williams, 2008). This would include EDPs in UNHCR's protection sphere without needing to bind states into agreements and without institutional changes (McAdam, 2014). Time-honored seasonal labor or transnational settlement patterns, such as a farmer moving to a distant city during the dry season, is a strategy that individuals can use to remove themselves from an unstable situation and that could be integrated into an *ad hoc* extension of UNHCR's mandate (Lubkemann, 2005).

Supporters of this approach argue that IDPs were originally brought under UNHCR's mandate through *ad hoc* protections, but are now a central component of UNHCR's work and formally included in UNHCR's mandate (Loescher et al.,

2008; Gemenne & Brüker, 2015). Especially since some academics consider EDPs to be a subset of IDPs, there is some possibility that environmental migrants could experience a similar route to recognition as IDPs (Ibid). A downside of this *ad hoc* approach is that it does not create normative standards that UNHCR would be able to enforce, unlike most formally negotiated international agreements (Hall, 2012). Another downside to this approach comes from the complexities of the 'asylum-migration nexus', in which formalized migrants, informal or clandestine migrants, and refugees all use the same routes (Castles & Van Hear, 2005; Betts, 2010). This muddying of migration pathways could lead to hierarchies of need and politicization of what forms of migration, including migration due to environmental degradation, should be protected (Williams, 2008; Betts, 2010). Regardless, even simple, temporary solutions that would not be difficult to convince states to adopt must have sufficient political will, funding, capacities at the international level, and civilian and military support to function well and serve as a durable solution (Betts et al., 2013).

### 4.2.3 Soft Law Framework

The third policy option is to establish a soft law framework, drawing from the existing, highly effective Guiding Principles on Internal Displacement and national or regional action plans like the Cartagena Declaration (Ferris & Bergmann, 2017). The Guiding Principles extend protection to IDPs – a group of concerns that were previously functionally excluded from migration and humanitarian law (Ferris & Bergmann, 2017). The Guiding Principles are not legally binding and are instead more consistent with a set of norms (Ibid). They were drawn from disparate pieces of existing case law, so as to remain consistent with international human rights law and to deflect criticism (UNHCR, 2004; Betts, 2010). A similar framework to the Guiding Principles could bring EDPs into a sphere of protection and provide a set of norms for countries to follow (Mayer, 2011; Ferris & Bergmann, 2017).

This framework could be built on international human rights and humanitarian law bodies, not necessarily just on refugee law (Betts, 2010; Höing & Razzaque, 2012). Without such a framework, states and organizations do not have clear guidelines to follow for how to deal with EDPs, particularly about how to fill protection gaps and fulfil their international humanitarian obligations (Betts, 2010; Ferris & Bergmann, 2017). Both states and international organizations have illustrated, in various international forums, that there is a demand for clearer guidance on how to understand and apply their existing commitments – as long as they do not have to assume new obligations (Betts, 2010; Cohen, 2013). Betts (2010: 215), a vocal proponent of this soft law approach, argues that "What is required is simply: (a) an authoritative consensus on the application of these instruments to the situation of vulnerable migrants, and (b) a clear division of responsibility between international organisations *[sic]* for the operational implementation of such guidelines". This soft law framework could draw from two key elements: the strengthening of prevailing international human rights norms into clear principles for how to respond to the

needs of different groups; and enhanced mechanisms for international collaboration, among states and organizations, to collectively and collaboratively implement these norms (Ibid).

Optimistically, soft law can provide a platform for states and international organizations to dialogue, resolve any uncertainties, and explore creative or innovative solutions without having to commit to formal hard law structures (McAdam, 2014). It is probable that, to successfully implement a soft law approach, at least one international organization and likely one global power state – or powerful regional body like the European Union – would have to lead the charge. This approach may also improve good will between states, international organizations, and UNHCR, through the negotiation process (Ibid). The soft law framework could lead to the implementation of hard law and ratification at the regional level, like in the African Union Convention, which would necessitate elevated political cooperation (Betts, 2010; Ferris & Bergmann, 2017).

Opponents contend that gaps in protection could persist or worsen from knitting together international law bodies into a soft law framework (Höing & Razzaque, 2012; Ferris & Bergmann, 2017). It seems unlikely that UNHCR would lead the formulation of a soft law framework, for fear of being bound to stretch their resources thin, so another influential actor would likely need to step up, even though many countries that have started to experience EDD are not powerful on the global stage. Another obvious pitfall is that without a hard law framework or another compulsory funding mechanism, it is unlikely that there will be sufficient resources to implement robust protection for EDPs (Mayer, 2011).

### 4.2.4 New Treaty

The fourth option is to start fresh with an entirely new treaty or protocol designed specifically to address EDD. This bold approach recognizes that EDPs are unlikely to be meaningfully included in existing refugee law, and a new treaty could be easily expanded or changed as the scale of EDD becomes clearer (Falstrom, 2002). This possibility has been suggested before, by academics and at the international level, including by the German Advisory Council on Global Change in 2007 (Biermann & Boas, 2008). Biermann and Boas (2008) suggest that a new treaty be established under the jurisdiction of the UN Framework Convention on Climate Change (UNFCCC). The international community could also create a consortium of funding and implementing agencies, including possibly the World Bank and the UNDP (Biermann & Boas, 2008). An alternative approach, recommended by Mayer (2011), is for the UN to adopt a framework that explicitly recognizes the rights of EDPs, and at the same time establish a new agency to be in charge of providing *ad hoc* protections to EDPs.

A treaty or protocol's executive committee could establish a running list, that any state could contribute to, of areas in imminent need of relocation assistance (Biermann & Boas, 2008). This would be consistent with sovereignty principles of the UN system, as it would rely on buy-in and acknowledgement from the affected

country (Ibid). This approach could also improve burden-sharing among countries – the acknowledgement of 'common but differentiated responsibilities', as Biermann and Boas (2008) put it – and integrate developing countries into a "global mitigation regime of quantified reduction and limitation objectives" in a way that could increase developing countries' bargaining power on the international stage.

Advocates of establishing a new treaty or protocol to address environmental migration assert that doing so could build political and financial support, attract attention from states and international organizations, and link protection to the huge investment in climate change science (Biermann & Boas, 2008). Critics argue that constructing a new framework to address EDD would likely shift focus away from those fleeing natural disasters in the short term, who are already protected to some degree by UNHCR (Hall, 2012; McAdam, 2014). This may also stem from the conceptual difficulty of attributing long-term migratory patterns to specifically environmental causes, aside from short-term, rapid-onset reasons (McAdam, 2014). Other, perhaps more cynical, critics contend that establishing a new hard law framework seems only less likely over time, as states lack the political will and have pushed back against shouldering new legal commitments to EDPs (McAdam, 2014).

## *4.3 A Potential Way Forward: Towards a Regional Approach*

Several of the policy options discussed above should be combined to create a maximally comprehensive response to EDD. In the short-term, the international humanitarian community could choose to temporarily extend protections and reevaluate the scale of the problem in the future. Soft law structures should be developed, once extended protections are in place, to guide states on how to address environmental migration and to develop a set of norms. EDPs may foreseeably be included in UNHCR's mandate in the next several decades, as the extent of EDD becomes felt more acutely by donor countries. By the middle of the century, EDD should be tackled through a new international treaty, once countries get accustomed to the scope and concept of EDPs through short-term increased protections. No matter what form of protection is extended to cover environmental refugees, both the causes and outcomes of environmental degradation and climate change must be addressed at the international level (Williams, 2008). This path towards acknowledgement and response for EDPs would doubtless be a significant achievement in humanitarian action at the global level.

A major hurdle for Latin American migrants and EDPs is that the international community generally frames Africa and Asia as the regions with the highest number of EDPs and, consequently, focuses on those regions, to the neglect of Latin America. There is some truth to this notion – India, Bangladesh, Philippines, China, and Somalia were the five countries with the highest number of people displaced due to natural disasters in the first six months of 2020 (Migration Data Portal, 2020). This pattern ignores the role that Latin American EDD may play on migration in the future, both in the region and across the world (Dingeman et al., 2017). This is why

a collaborative, regional approach to address EDD, that can be tailored to the needs of Latin American states, cities, and people would be the best path forward.

### 4.3.1 The Benefit of Regionalism

While the prevailing international system places states as the building blocks and referent entities, this may shift by the end of the twenty-first century. Cities – particularly megacities – have taken center stage in the fight against climate change and serve as hubs of innovation (Esri StoryMaps Team, 2021). Bogotá, Buenos Aires, Lima, Mexico City, São Paulo, and Rio de Janeiro, which all have populations over ten million people, are set to urbanize even more through the century, and may become more important political and cultural entities than state governments (Esri StoryMaps Team, 2021). Additionally, supranational organizations may become more important over the course of the twenty-first century, especially when it comes to sharing, managing, distributing shared, and contentious natural resources and at the continental or regional level. Supranational regional organizations, like the European Union and the African Union, can unite states committed to shared goals and facilitate regionalism.

Regionalism occurs when governments band together based on regional, collectivist ties and eschew the pursuit of purely individualist interests, often with regards to free trade deals and open market schemes (Grugel, 2004). Regionalism was particularly prevalent during the period of heightened (neo)liberalism in the 1980s and 1990s (Ibid). Few organizations meaningfully unite most or all Latin American countries. Malamud and Gardini (2012) list nine Latin American bodies that each have some unsuitable characteristic, like the Ibero-American Community that incorporates Andorra, Spain, and Portugal, and "the processes of subregional integration (Mercosur, the Andean Community, the Central American Integration System) [that] are even less encompassing" than other regional organizations. Organizations like the Organization of America States (OAS) include the United States and Canada. While these two countries may eventually experience the effects of EDD in Latin America via increased migration, they likely should not be meaningfully included in process of a regional response to and planning for EDD, as they are the two countries that are most likely to be involved in environmental conflicts in Latin America. Malamud and Gardini (2012:117) do note, however, that:

> One potential exception stands out: the Rio Group, which [as of 2012] numbers 23 members, including all of Latin America, but also a few countries from the Caribbean. Yet, there is still a caveat: this organisation *[sic]* lacks a secretariat or permanent body, so if it did have a number it would have to be a cell phone.

As a spinoff of the Rio Group, the Community of Latin American and Caribbean States (CELAC) was founded in 2011 with the Declaration of Caracas (Soriano, 2019). Thirty-three states in Latin American and the Caribbean have joined CELAC by 2021, with the goal to unite Latin American countries through improved political relations and to resolve tensions through regional dialogue (CELAC, n.d.). CELAC

provides a natural platform for Latin American countries to begin collaboratively planning for climate change and corresponding forced displacement. CELAC is a particularly useful organization because it includes a number of Caribbean countries, which will likely experience the impacts of climate change more rapidly (Watkins & Salinas, 2020). A collective platform like CELAC could also likely better attract international investment and generate research and interest into Latin American EDD than individual countries.

Particularly when it comes to environmental degradation, climate change, and environmentally driven migration in Latin America, it makes sense for Latin American states to develop a regional approach. Key to this approach is to first begin to sustainably manage natural resources and aggressively practice climate change mitigation activities within the region (Watkins & Salinas, 2020). Countries that share natural resources or directly benefit from ecosystem services from ecosystems that exist across international borders should develop joint action plans for how to mitigate and respond to climate change and its associated migration. This is true for countries that share the Amazon Rainforest, like Brazil, Peru, Ecuador, and Colombia, as deforestation, a higher incidence of forest fires, and extreme climate conditions are push factors for out-migration from the Amazon region (Maia & Shons, 2020). This is equally true for transnational, non-renewable natural resources like Lake Titicaca in Peru and Bolivia, which supports the urban population of La Paz, Bolivia and is dwindling in quality and quantity due to a high population density, intensive aquaculture, and heavy economic activity (Buytaert & Breuer, 2013; Archundia et al., 2017). Much international investment has been dedicated to specific environmental issues or ecosystems within Latin America, to the neglect of others, so it would make sense to centralize investment in CELAC or another regional body. Countries that are experiencing particularly acute climate change impacts or have had a recent natural disaster could perhaps apply to CELAC's centralized fund for short-term support or long-term financing options.

Once concrete, actionable, and comprehensive climate change plans have been settled upon, along with sufficient funding mechanisms from the international community, a regional approach to tackling environmental migration can then be negotiated. Several Latin American countries have already called for response and attention towards EDD in their national adaptation laws and plans on climate change (Watkins & Salinas, 2020). Peru's Framework Law on Climate Change "calls for addressing forced migration due to climate impacts, and… Honduras's National Strategy for Climate Change that proposes to establish a legal and institutional framework for migrations of climate origin as part of their adaptation strategies" (Ibid: n.p.). A unified regional approach would be a form of soft law that would codify norms and provide funding mechanisms for similar strategies to those of Peru and Honduras. The proposal of similar laws in Latin American countries shows that this approach would not be a major overstep.

Latin American governments should care about pre-emptively coming up with plans for how to fund and address EDD because, unlike most other world regions, Latin America has close linguistic and cultural ties. These close ties could make migration slightly easier within the region than outside it and could drive more

cross-border migration than in other regions. This is already being tested with the five million displaced people from the Venezuelan diaspora, upwards of 80% of whom have chosen to stay in the region (IOM, 2020). Colombia, Peru, Chile, Ecuador, and Brazil all host large Venezuelan populations (Ibid). Colombia alone hosts more than 1.8 million Venezuelan migrants and, in a move praised by UNHCR and the international community, has recently announced an initiative to regularize migrants' status and provide them with protection for up to ten years (IOM, 2020; UNHCR, 2021b). The Temporary Protection Status will provide Venezuelans in Colombia "access to basic services including the national health system and COVID-19 vaccination plans…and access to the job market, which in turn serves to lessen the dependency of people on humanitarian assistance while also contributing to the country's post COVID-19 socio-economic recovery" (UNHCR, 2021b).

It would be essential for CELAC or another regional body to establish a scheme, like Colombia's Temporary Protection Status for EDPs, at the regional level so most or all states are party to burden-sharing and financing, instead of individual states bearing the cost of EDD. Colombia's Temporary Protection Status Initiative aims to reduce the human cost of migration in a way that could be applied to EDPs in the future. CELAC could also harness the shared sense of burden-sharing among Latin American states, particularly those in South America, from managing and responding to Venezuelan migration and direct it towards EDPs as the need arises. As Keyes (2019) points out that:

> [T]here is a solidarity among countries, as many are grappling with internal climate-change migration and adaptation…After decades of seeing the refugee framework as divided between countries 'creating' or sending the refugees, and countries receiving the refugees, this shared experience marks a profound change. (p. 26)

## 5 Conclusions

Latin America is a particularly important – and relatively understudied – region in which to explore migration driven by climate change, environmental degradation, inequalities, and conflict (Piguet et al., 2018). Latin America's economic history can be traced by way of natural resources and land use, stemming from European colonial rule in which native and Africa-born slaves worked on sugar, coffee, and rice plantations (Hall, 2008; Panizza, 2013; Navas et al., 2018). American corporate extractivism and political destabilization that fashioned 'Banana Republics' in the nineteenth century set the stage for a commodity boom in the early 2000s that propelled economies to grow at the highest rates in decades and then crash again (Hall, 2008; Panizza, 2013; Navas et al., 2018). The end of the commodity boom resulted in slowed job creation, higher levels of poverty in many Latin American countries, and slowed growth – trends that have gotten starker with the lockdowns and loss of economic activity caused by the novel coronavirus (Balakrishnan & Toscani, 2018). All of these commodity-driven paths to economic improvement have resulted in

worsened environmental degradation over time, which will likely lead to EDD within the next decades of the twenty-first century.

In the aggregate, individual decisions to migrate add up to tens of millions of migrants moving every year, which inspires practitioners and scholars to pejoratively "speak of flows, streams, waves and trickles of migrants...the metaphors we use to talk about migration require us to think of migrants as an undifferentiated mass" (Turton, 2003: 10; Schon, 2019). This has implications for the way refugee populations are viewed and treated – by host countries, humanitarian organizations, and scholars – all of which tend towards myopic responses to migration because of a lack of clarity of the causes of flight and avoiding addressing additional, systemic push and pull factors (Lischer, 2007). Regardless of how migration is viewed from the top-down, the human cost of environmental migration is very often great. In the future, greater compassion among citizens should be hoped for when it comes to long-term migratory paths into their country from people fleeing unbearable environmental conditions or natural disasters.

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