Chapter 5
Disasters Across Borders: Borderlands as Spaces of Hope and Innovation in the Geopolitics of Environmental Disasters

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5.1 Introduction

Disasters defy borders. To be sure, this stubborn refusal to stay within neatly drawn geopolitical lines has been evident for a very long time. The Laki volcanic eruption in southeast Iceland in 1873 left a global trail of destruction that reached from Siberia to the Gulf of Mexico, eventually contributing to the death of six million people worldwide. Much of this was due to its cascading impacts, notably crop failures and livestock losses in Iceland, France and Japan. A decade later, another volcanic event, the Krakatoa eruption in the Sundra Strait between Sumatra and Java, bequeathed a massive footprint, including tsunamis that reached as far as South Africa and 5 years of global cooling. More recently, the 2004 Indian Ocean tsunami, a consequence of a powerful earthquake that occurred off the west coast of Sumatra, resulted in 200,000 casualties in 14 countries, extending as far as Somalia. Not only do disaster agents such as earthquakes, volcanoes, tsunamis, typhoons and floods not respect territorial boundaries, but how well we cope with them continues to be significantly constrained and problematised by the presence of national borders. It makes sense then to not only speak of *disasters without borders* (Hannigan 2012) but also of *disasters across borders.*

Cross-border environmental disasters can assume different forms. In the examples cited above, a common disaster agent typically impacts multiple political jurisdictions, either concurrently or sequentially. Little (2010, p. 29) distinguishes among three type of infrastructure failures that involve spillover in engineered urban systems (and which may also be applied to environmental disasters): *cascading failure* (a disruption in one infrastructure causes a disruption in one or more other infrastructures), *escalating failure* (a disruption in one infrastructure exacerbates an independent disruption of a second infrastructure) and *common cause failure* (a

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disruption of two or more infrastructures at the same time because of a common cause, for example a natural disaster). In several of the other chapters in this volume, the authors report that megaprojects undertaken in one nation produced negative effects for states downwind or downriver. In the Mekong River basin, hydropower dam construction upstream occurs at the expense of ecosystems and livelihoods (fishing, rice production) tied to the river in countries situated at lower elevations. Similar problems occur internally. The issue of borders has been prominent along the Narmada River in western India, especially with the Sardar Sarovar dam: the benefits of the dam flow mostly to the state of Gujarat, while most of those whose land and homes are submerged live in Madhya Pradesh (Basu 2012, p. 100). Trans-boundary smoke or haze pollution attributable to Indonesian forest and palm oil plantation fires has become a recurring problem for the neighbouring nations of Singapore and Malaysia. Environmental disasters originating in distant continents may take decades to fully manifest themselves. For example, scientific experts deem as possible a complete drying out of Lake Reba (also known as the 'Pink Lake') on the Cap-Vert peninsula of West Africa within the next 80 years, in significant part as the result of environmental pressures linked to climate change—notably increasing evaporation produced by global heating, leading to salinisation and alkalinisation of the soil (Zen-Ruffinen and Pfeifer 2013).

The incidence of compounding cross-border disasters with multiple causalities and cascading impacts is widely thought to have been increasing, especially in Asia. Douglass (2016) links this to several types of urban transitions taking place across the continent: the agglomeration and formation of mega-urban regions, the spatial polarisation of urbanisation in high-risk zones such as coastal regions and major river deltas, new forms and magnitudes of vulnerability in urbanising settlements, and the expanding ecological reach and demands of cities into rural areas and across administrative borders. Asia's accelerated urban transition, Miller and Douglass (2016) assert, 'is both a major source and target of increasingly frequent and costly environmental disasters'. In similar fashion, Forman and White (2011, p. 6) note that rapid urbanisation in the Dominican Republic has put an increasing proportion of the population at risk from disasters. In Santo Domingo, the capital, the trend in urban development has been to 'build up', with only haphazard and inconsistent enforcement of building codes that mandate earthquake resistance. Santiago is built on a fault line and contains a hydraulic dam that threatens to overflow in the event of intense seismic activity. Much of the migration to Dominican cities is to coastal areas, and specifically to flood plains and other insecure areas that are not subject to proper urban planning.

In this chapter, I propose an alternative way of conceptualising 'disasters across borders'. At present, there are three main ways of framing the issue (see below). The disaster administration approach posits that cross-border problems result from faulty communication and incomplete planning. The solution lies in undertaking enhanced administrative measures such as universalised operating procedures and best practices. The governance approach focuses on disaster risks and vulnerabilities that differentially impact those living in poor neighbourhoods. Centralized, bureaucratic service delivery impedes an effective response, as do neoliberal policies

that are geared more to slum clearance and urban redevelopment. This is compounded where grassroots communities under threat span national borders. Improved governance means strengthening decentralized, community-based responses to natural disasters. The legal and normative approach is directed primarily at the challenges faced by a growing number of cross-border, temporary migrants. Possessing virtually no citizenship or human rights in the host nations, they live in a type of liminal zone. Solutions are not easy to come by, but are more likely to be found in the province of soft law rather than in formal treaties and agreements.

Rather than take national borders as fixed and immutable, I suggest that they are fluid, contested and transitional. This is especially relevant to the case of cross-border migration during times of disaster. As the Finnish geographer Anssi Paasi (2011, p. 62) observes, 'Rather than neutral lines, borders are often pools of emotions, fears and memories that can be mobilised apace for both progressive and regressive purposes'. Bordering, then, both separates us and brings us together. It allows certain expressions of identity and memory, Paasi notes, while blocking others. By adopting this perspective, we can open up new ways of reimagining zones impacted by cross-border environmental disasters as constituting 'spaces of hope' with distinctive ecological and sociological identities that transcend sovereign constraints. The emphasis here is not on generating specific new initiatives, although some such as humanitarian corridors for cross-border disaster migrants can be suggested, but rather on re-focusing the discussion on borderlands and their inhabitants.

5.2   Borders and Border Spaces

The recent exodus of asylum-seekers from the Middle East toward Western Europe has reignited a global debate over the fixity and meaning of borders. This ongoing conversation features two conflicting viewpoints. One, formulated around the notion of the 'borderless world', draws on humanitarian discourse to assert a universal right to secure living arrangements and democratic freedom. By contrast, the doctrine of territoriality asserts the right of sovereign nations to exert exclusive force and law within a particular territory, and to enforce this by controlling access across their internationally recognised borders. In the case of the currently unfolding Syrian 'diaspora', some nations, notably Germany (with the support of Sweden, Austria and France) have drunk deeply (at least initially) from the well of compassion and moral conscience, opening their borders to hundreds of thousands of refugees and extending a 'welcome culture' (Anonymous 2015, 23–4). Others, notably Hungary and Macedonia, have rushed to seal their borders with barbed wire and walls, justifying this on the grounds that asylum-seekers are in fact economic migrants who, if admitted, would overwhelm the sanctity and robustness of traditional cultures and communities.

Kolossov (2005) compares and contrasts two theoretical perspectives, the political and the global, that have centrally informed border studies. There are two

versions of the *political* approach. In the 'realistic' paradigm, the boundaries between states are interpreted as strict dividing lines protecting state sovereignty and national security. According to the 'liberal' paradigm, the principal function of state borders is to connect neighbours and to eliminate various international interactions; accordingly, the principal task at hand is 'to eliminate territorial disputes and border conflict and to develop a cross-border communication and infrastructure' (p. 612). More recently, a *global* approach has begun to garner considerable attention. This paradigm privileges the role played international networks. In this view, the global expansion of networks has transformed state boundaries into virtual lines, replacing them with multiple economic and cultural boundaries.

Asia has its own border issues. Introducing a special issue of the *Journal of Borderland Studies* on the topic of 'Asian borderlands', Willem van Schendel and Erik de Maaker (2014) remind us that many Asian borders were not demarcated until the second half of the twentieth century. Even today the exact location of these borders remains undecided, especially in regions whose terrain is characterised by mountains, rainforests, desert and marshland. Ganguly-Scrase (2012, p. 77) identifies the borders between nation states in South Asia as being 'largely artificial constructs arbitrarily drawn through ethnic, religious, cultural, and economic communities'. The fluidity of borders, which often isolates communities, is exemplified in situations where a river that often changes course is designated as a national border.

Nonetheless, state borders have taken on an increased importance in the face of unprecedented economic growth in the region. Even as Asian nations open their economies to the wider world, they have reinforced and militarised national borders. This echoes what has been happening recently within the EU, where Member States increasingly undercut the policy of free movement by imposing a stern regime of internal border controls. Border control, Barker (2016) observes, 'patrols the boundaries of belonging, sorting out who belongs and who does not'. This hardening of borders, van Schendel and Maacker (2014, pp. 3–4) note, requires increased demarcation and monitoring of cross-border mobility of people and goods, and applies to both land borders and maritime environments. Translating Cunningham's (2004) observations on the movement of people at the US-Mexico border to the Asia Pacific region, Ganguly-Scrase and Lahiri-Dutt (2012, p. 14) point out that borders are contradictory insofar as they are simultaneously sites of movement (of people, goods, capital) and sites of enclosure where 'rules are formulated, enacted, and negotiated concerning who has the right to mobility and who does not'.

5.3   Beyond Borders

By their very nature, borders are never immutable, that is, they are 'always in a state of becoming' (Mountz 2011, p. 65). The regions of Alsace-Lorraine on the French-German border, and Silesia, on the German-Polish-Czech border, constantly shifted nationalities throughout the nineteenth and twentieth centuries, depending on who

won or lost militarily. Some land disputes between nations over border areas have gone on for centuries. For example, a coastal land dispute between Chile and Peru has ebbed and flowed since the Pacific War more than a century ago, while Argentina recently revived a long-time border dispute with Chile over ownership of 100 miles of contested land known as the Southern Icefields which contain the largest reserve of potable water in the world (Fendt 2010). The geopolitics of the Asia Pacific region have recently been dominated by an escalating string of confrontations between China and its neighbours over ownership of the Paracel and Spratly Islands.

Other ways of conceptualising borders as transnational spaces are possible here. Some of these are designed to enhance the securitisation of citizenship and the state. A decade ago the term 'the seam' was introduced into US military jargon. The seam refers to 'a zone between inside and outside national space, where old geopolitical divisions no longer hold; the border between police and military authority is blurred, and so too is the line between crime and terror' (Cowen 2010, p. 79). Maritime ports, for example, are increasingly becoming transformed into 'exceptional seam spaces', where the border represents a special 'transitional zone' rather than a two-dimensional, bifurcating line across absolute space (Cowen 2010, pp. 78–9). Kolossov (2005, p. 623) cites the concept of 'border space' that embraces not only the area along the boundary but also internally deep within state territory. Examples of this are international airports and special customs or free economic zones.

Other reconceptions of borders and bordering are more progressive. It is possible, for example, to reject the demarcation of space on purely political or jurisdictional grounds in favour of the idea of managing or governing a *commons*. Commons are collectively shared resource sites. Without regulation or cooperation, they will sooner or later be exploited and exhausted. The decade-long deliberations by the United Nations Law of the Sea Conference (UNCLOS III) highlights this. In order to protect untapped seabed resources from uncontrolled mining and oil drilling, UNCLOS redefined maritime space, designating the seafloor as lying beyond the regulatory geographies of state sovereignty (Hannigan 2016, p. 68) and under the supervision of the International Seabed Authority (ISA).

One promising cutting edge approach involves interrogating the very definition of a border. Chris Rumford (2011) has proposed that to understand borders fully we need to stop 'seeing like a state' and start 'seeing like a border'. In the first instance, this entails decoupling borders from fixed physical lines of demarcation. People can construct borders as local, national or transnational in scale, or reconfigure the border as a 'portal' (e.g. airport, maritime port, railway station). Second, bordering is not inevitably the business of the state. Rather, it could and should be the business of a variety of non-state actors ranging from NGOs and grassroots activists to ordinary citizens. Even agricultural producers who are striving to create a 'Protected Designation of Origin' status as a means of branding local produce such as Melton Mowbray pork pies and Stilton cheese are 'borderworkers', who in their own way 'are active in constructing, shifting and erasing borders' (p. 67). Third, the capacity to make or undo borders can become a source of political capital, that is, expanding constituencies to include non-citizens such as migrants and refugees who may coalesce at the borders. Fourth, borders and borderlands are fundamentally sites of

contestation and claims-making. In sum, seeing like a border 'involves the recognition that borders are woven into the fabric of society and are the routine business of all concerned' (Rumford 2011, p. 68).

How then, can we start 'seeing like a border'? One way is to start thinking of borders as social and cultural spaces in their own right. Social scientists have labeled these as *borderlands*. Anthropologists Alexander Horstmann and Reed Wadley (2006) argue that rather than being dead zones, borderlands are vibrant sites of human agency. The authors draw a contrast between state borders that are characterised by essentialised tradition and community, and borderlands, which are complex social systems that question the nature of the state. The negotiations between populations and the state, they say, are particularly intense in the borderlands of Southeast Asia, where, with the possible exception of Singapore, the state's sovereignty in border regions may often be marginal.

Horstmann (2002) illustrates this empirically in a series of ethnographic case studies of networks of border people in between Thailand and Malaysia. The Patani Malays on the east coast of southern Thailand, the Sam Sam on the west coast, and the Kelantan Thais on the east coast of northeast Malaysia are ethnic and religious minorities (Thai-speaking Muslims in southern Thailand and Buddhist Thais from northern Malaysia) who are located in a 'diasporic trap'. On the one hand, they have been given citizenship, albeit a special category that withholds state resources and certain rights. At the same time, they embrace a form of dual citizenship, defined in part by holding double identity cards and partly through practice. Horstmann reports that they acquire multiple citizenship rights through various means: by registering the birth of their children just across the border, by marriage and by applying for naturalisation. Upon acquiring new citizenship rights, they carefully keep their existing identity cards. Life in these borderlands is anything but easy. For example, Thai fishermen from Ban Sarai in southern Thailand who fish illegally in Malaysian waters are quite vulnerable, facing the possibility of arrest and deportation by the police and economic exploitation by Malaysian middlemen. Nevertheless, trapped ethnic minorities who are accorded inferior positions in the space of the nation state are able to find ways to liberate and empower their lives through border-crossing practices.

5.4 Cross-Border Environmental Disasters

As noted in the introduction to this chapter, the incidence of compounding cross-border disasters with multiple causalities and cascading impacts is assumed to have been sharply increasing in recent years, although firm statistics on this are rather hard to come by. In discussing the impact of climate change on the cross-border displacement of people, Kälin and Schrepfer (2012) note that the number of people displaced by climate-related sudden-onset disasters is indeed very substantial—almost 95 million people between 2008 and 2010, according to the Norwegian Refugee Council—and will likely increase in the foreseeable future. Most, however,

are displaced internally and do not appear to cross borders. There are some notable exceptions. The authors report that during a visit in Mozambique and South Africa in 2008 they heard anecdotal evidence that people from Mozambique and Malawi looked quite regularly for refuge in neighbouring countries when displaced by flooding (p. 14).

In the case of disaster, differing laws and norms across national borders constitute barriers to optimal relief and resettlement efforts. In his classic case study of the 1954 Rio Grande Flood, Clifford (1955) noted that core values such as *dignidad* (dignity, imbued with patriotic or racial pride) forced officials in the Mexican community of Piedras Niegras to refuse material goods from relief services agencies in the twin border city of Eagle Pass, Texas. In a subsequent study, Stoddard (1961, 1969) found that the same applied to the Mexican American population of Eagle Pass, who preferred receiving offers of inadequate housing and bare subsistence rations from kinfolk to the well-balanced nutritional meals, hospital aid, and physical comforts available to them through Anglo-dominated professional relief agencies. In cross-border disasters conflict can arise over differing expectations with regard to carrying weapons, the use of restricted pharmaceutical products, and standards of environmental protection. Edwards (2009) points out that a particularly difficult issue is the treatment of women responders and victims. Women disaster victims in traditional patriarchal societies may be required to receive food or other care only after the men have been served, or may be denied contact with male responders, thus potentially lengthening the time they must wait for care which can only be provided by women first responders.

Administrative solutions usually address and attempt to redress technical glitches such as those related to communicating and coordinating warnings about tsunamis, earthquakes or typhoons. Typically, cross-border disasters are conceptualised here as posing a host of organisational and managerial challenges, which can be largely met through better planning and coordination. Thus, Tricia Wachtendorf, whose MA thesis focused on cross-border (Canadian-American) interaction during the 1997 Red River Flood, describes disasters that extend beyond national borders as *trans-system social ruptures* (TSSRs). TSSRs, she says, 'have implications for empirical investigation, operational management and policy framing' (2009, p. 380). Such ruptures are most likely to be repaired in networked 'systems' with enhanced levels of dependence and interdependence. These networks can be physical (linked road systems, tightly coupled electrical grid lines and transformers) or social (interactions between organisational actors in the form of the supply and exchange of information, personnel and material resources). In the case of the Red River Flood, Wachtendorf found that routine, cross-border interaction during noncrisis times facilitated cooperation during the flood emergency: "Pre-established ties and pre-event mechanisms for interaction can work to correct a cross-border system failure more readily than if those social ties were not already established" (2009, p. 386). In the case of international trans-boundary disasters such as this, Edwards (2009) advises, 'a pre-disaster operational plan is essential to ensure that it is functional in the breadth needed'.

Miller and Douglass (2016) criticise this type of 'disaster administration' orientation on the grounds that it neglects or overlooks critical historical, social and cultural dimensions of environmental disasters in favour of a 'best practices' approach which spells out a standardised set of 'lessons learned' and universalised operating procedures. In the disaster administration approach, the prime responsibility for disaster response rests with public agencies, not at the grassroots level. If things go wrong, it is because of lack of trust or due to communication lapses between cross-border 'partners'. Consistent with the closed systems theories which dominated the study of organisations in the 1950s and 1960s, a steady state or equilibrium is assumed to be the normal state of affairs. Disasters are treated as 'ruptures' which must be repaired so things can be returned to a state of 'normality'. There does not seem to be much room here for significant innovation and change, although Kris Berse in his chapter in this book argues that a network of city-to-city cooperation in Asia that extends relief and technical assistance and transfers best practices, even where localities do not share a border, can 'provide a flexible mechanism for effecting changes at any point in the disaster cycle'.

In Asia and the Pacific, cross-border disaster risk management issues have increasingly been treated as a *governance* problem, with inclusiveness and cooperation as key determinants' (see Guilloux chapter in this volume). By placing applied research on disasters under the umbrella of governance rather than management, Miller and Douglass (2016) argue, we can improve our understanding of how closed and ineffective governance regimes exacerbate social inequality, placing the poor and the powerless at greater risk from disasters. Repairing system social ruptures is not sufficient. The rupture of a disaster often exposes underlying vulnerabilities in urban areas. In New Orleans, for example, the poor black parishes were inundated with water when Hurricane Katrina provoked a breach in the protective levees, while the middle-class, tourist-oriented city on higher ground endured only minor damage. In the 2011 floods in Bangkok, Thailand, the low-income suburbs were heavily flooded while the affluent inner-city area with its financial district was more or less protected (Chintraruck and Walsh 2016). In their chapter in this volume, Friend and Thinphanga focus on the Mekong region, showing that vulnerabilities and risks are distributed unevenly across different groups of people, the administrative boundaries of cities, and national boundaries.

Governance issues in cross-border disasters often revolve around the gap between centralised, bureaucratic service delivery and decentralised, community-based responses. Recent field studies in Indonesia and Thailand demonstrate that residents of marginalised flood-prone neighbourhoods have come to distrust official state programmes of flood management, relying instead upon 'their own independent coping mechanisms and acquired intergenerational knowledge to pursue their needs and interests outside official channels' (Miller and Douglass 2015, p. 2). This is compounded where these grassroots communities span national borders. As the classic sociological studies of flood response across the Rio Grande River indicate (see above), self-reliance trumps official disaster management delivery, even where the latter may be more effective.

A third approach to cross-border disasters treats them as essentially *legal-normative* challenges. Legal-normative issues are most often linked to the flow of people across national borders in environmental disasters such as floods and famine, where temporary migrants face a host of difficulties related to a lack of citizenship and human rights. Rather than signing formalised bilateral treaties, the most promising solutions here are said to reside in the domain of 'soft law' (Kälin and Schrepfer 2012).

One noteworthy attempt to theorise the protection of people displaced across international borders in the context of natural disasters and the adverse effects of climate change is the *Nansen Initiative*. Funded primarily by the governments of Norway and Switzerland, this three-year consultative process is organised around three 'pillars': international cooperation and solidarity; standards for the treatment of affected people regarding admission, stay and status; and operational responses including funding mechanisms and responsibilities of international humanitarian and development actors. Kälin and Schrepfer (2012, p. 61) outline a plan to recast cross-border displacement in environmental disasters under the auspices of the United Nations High Commissioner for Refugees that parallels that proposed in the Nansen Initiative. New instruments here, they specify, should contain four elements. People in need of protection (beneficiaries) should be defined as those whose return to their country of origin would be (i) legally impermissible (ii) not feasible (iii) unreasonable in terms of humanitarian considerations. Beneficiaries should be entitled to enter countries of refuge and remain there as long as the obstacles to their return exist. If, after a prolonged period of time, it becomes clear that return is impossible, permanent admission should be granted. Beneficiaries should be entitled to an array of status rights, including access to the labour market, housing, health services and education; protection against discrimination; and freedom of conscience, religion and opinion. Finally, the institutional arrangements governing the tenure of cross-border disaster migrants should be defined, notably those referring to financial and operational support.

The moral imperative behind approaches such as the Nansen Initiative dictates that fundamental human rights do not stop at the border. Unfortunately, enforcing this on the ground poses a formidable challenge. As Horstmann and his colleagues demonstrate in their ethnographic research on ethnic borderlands in Thailand (see above), even possessing double citizenship is no automatic guarantee of legal security and social acceptance on either of the dividing line. Kälin and Schrepfer (2012, p. 58) observe that there is seldom much understanding among government actors either of the rights related to admittance or of the status rights of environmental migrants living in foreign territories. Nor is there an established intergovernmental forum or process to address the issue in a consistent way. In the present context, they conclude,

> it is likely that negotiating a convention on cross-border movement of persons in the context of climate change would be very difficult because of largely incompatible interests of potential countries of origin and countries of destination. (p. 70)

A more appropriate approach lies in 'soft law'—for example, highlighting gaps in present international law and using these as a basis for future action. This course of action would mainly though not exclusively address the many gaps in present international law identified above (Kälin and Schrepfer 2012, pp. 71–2).

5.5   Disaster Cooperation and Disaster Diplomacy

Foreign offers of assistance during a disaster event are occasionally rebuffed altogether. Documented examples of this in Asia (Hannigan 2012) include: the refusal of international aid by the Chinese government during the 1976 Tangshan earthquake, in which as many as 700,000 residents may have perished; Japanese reluctance to accept international aid during the Great Hanshin Earthquake of 1995; the sealing of the border by the ruling military junta in Mynamar (Burma) after the 2004 Indian Ocean earthquake/tsunami, and again in 2008 after Cyclone Nargis; and North Korea's blocking of an offer from South Korea to transport emergency aid overland by rail to victims in a massive 2004 explosion in which a power line struck wagons of oil and chemicals. Reasons for this vary: a strategic move aimed at building domestic political support by demonstrating that a regime can cope alone without seeking external assistance; paranoia that foreign powers will use the occasion to invade; or simply a sense of profound isolationism. Having made its point, the recalcitrant state will then usually relent. North Korea permitted relief supplies to enter the country by sea, thereby avoiding visuals depicting lines of South Korean trucks crossing the demilitarised zone (but also delaying the arrival of aid by several days). China continued to refuse international aid but opened the disaster zone to earthquake engineering experts from the West.

More often than sealing the border and refusing aid, a nation will acknowledge that it needs help, but chafe at the heavy-handed intrusion of international aid workers and donors, something that has been magnified by recent efforts at politicising disaster management and humanitarian relief for foreign policy reasons. This was widespread in Indonesia after the 2004 Indian Ocean tsunami, where the United States and Australia took advantage of a dire situation to expand their position as regional political players. Sometimes, humanitarian assistance will collide with national laws and regulations. For example, during Hurricane Katrina food aid packages from NATO and the EU that included British beef were deemed not legally permitted because of an ongoing ban related to Mad Cow disease—the donations had to be warehoused and distributed to other nations whose food importation standards allowed them to accept the supplies (Edwards 2009).

On a more positive note, cooperation across borders can potentially provide an opportunity for the improvement of political relations. Despite years of mutual suspicion, in the immediate aftermath of the 2010 Haiti earthquake the Dominican Republic unconditionally opened its border; dispatched ambulances, helicopters and search and rescue teams; and facilitated the opening of a critical humanitarian corridor (see below) for the delivery of international assistance into devastated

Port-au-Prince (Forman and White 2011, p. 11). For a while, this new 'Good Samaritan' image re-framed Dominican-Haitian relations, leading to greater cooperation on issues of health, the border, security, climate change/the environment and cross island trade, although not human rights and migration (Kristensen and Wooding 2013, p. 3). Within a few years, however, this trend toward more soft diplomacy hardened, especially when the Dominican Republic began to step up the rate of repatriation of Haitians who had been displaced by the earthquake. Fulvio Attinà (2012, p. 29) has distinguished between disaster diplomacy and disaster cooperation. The former occurs primarily at the bilateral level and refers to situations where feuding countries temporarily suspend their differences in order to work together on disaster relief efforts. This is most likely to occur whether two nations share a land border or are located near one another. Research by Ilan Kelman (2011) indicates that disaster diplomacy does have the potential to reduce bilateral conflict, but only where a firm foundation for cooperation has been established prior to the disaster event.

These days, disaster cooperation must also take place at the global level, which Attinà defines as 'the wide set of relations and actions that are put in place by states and mostly international organisations to deal with disaster and everyday problems that cause large-scale shocks and setbacks' (Attinà 2012, p. 29). This has variously been called the 'international disaster relief system' (Green 1977; Cuny 1983); the 'international relief network' (Kent 1987); and the 'global policy field of natural disasters' (Hannigan 2012). Initially, disaster cooperation entailed sending money and supplies to stricken offshore populations, but today it is more likely to assume the face of scores of international non-governmental organisations descending upon the disaster area, often in competition with one another. For example, immediately after the October 2005 South Asia earthquake disaster, over 100 international organisations—United Nations agencies, INGOs (international nongovernmental organisations, European, NATO and bilateral partners—arrived in the earthquake zone to aid the relief effort (Hicks and Pappas 2006, p. 43).

With environmental disasters, which are larger and more complex, cooperation is likely to require a more complex form of diplomacy. Effective responses to those environmental problems that are said to magnify the probability and severity of disaster, especially in the nations of the South, demand global treaty-making efforts and other forms of collective action. Typically, global environmental treaty making and international cooperation that are needed to implement effective treaties

> require extensive consensus building, which in turn, requires effective ad hoc representation of all the stakeholders, face-to-face interaction among skilled representatives of the stakeholding interests, a real give-and-take aimed at maximizing joint gains, facilitation by appropriate neutral parties at various points in the process, informality that allows the parties to speak their minds, and extensive pre-negotiation that ensures opportunities for joint problem solving. (Susskind 1994, p. 61)

Even if this could be done, the international legal and policy framework for disaster management 'is insufficient to handle not only contemporary disaster threats but also the problems caused by the mega-disasters that will inevitably strike densely populated urban areas' (Haase 2010, p 227). This is especially the case

where patchy legal structures and policy declarations inflate the potential for legal disputes and confusion during emergency situations between nations.

5.6   New Ways of Thinking About Cross-Border Environmental Disasters

The notion of borderlands as crucibles of social and cultural change raises the possibility they could function as 'spaces of hope' (to use the title of a well-known 2000 book by the geographer David Harvey) in environmental disasters. Rather than think of environmentally displaced people who move across borders during disasters as being simply helpless victims who need to be rescued and resettled by NGOs, it might make sense to consider how they improvise, cope, and employ knowledge accumulated over the course of similar disaster events in the past. This corresponds with an approach to urban disaster governance that endorses a strategy of grassroots self-reliance incorporating coping mechanisms and acquired intergenerational knowledge divorced from official political authority (Miller and Douglas 2015, p. 2). As the contributors to Hortstman and Wadley's book (2006) demonstrate, people are not only constrained by borders; the crossing of borders opens up new options of agency.

A borderland may have an *ecological* character that spans politically established boundaries. River basins, for example,

> represent closely integrated natural regions, while at the same time they constitute a basis of settlement and transportation systems and often determine boundaries between historically created territorial and cultural communities. (Kolossov 2005, p. 627)

As Alam observes in his chapter in this volume on trans-boundary disputes between India and Bangladesh, there is often a fundamental discordance between political and ecological boundaries that generates strong narratives and counternarratives on both sides of the boundary. Any change in the ecosystem, for example the pollution of transnational rivers, produces adverse socio-economic impacts on the other side, notably in the form of habitat destruction, economic decline and population displacement. Disaster governance operates within an urban matrix that encompasses the ecological reach of cities into remote and rural areas and spills across borders.

This phenomenon has been recognised for a long time in the bioregionalism movement, whose central philosophical belief states that societies should be organised by commonality of place rather than by arbitrary political boundaries. A bioregion here refers both to a geographic terrain and a terrain of consciousness (Hannigan 2011, p. 328). While bioregionalism is unlikely to displace political boundaries as the formal structure for governance any time soon, it is more likely to gain traction in a form where it denotes 'a place or community linked to nature and with which residents identify in historical, cultural and material terms' (Lipschutz 1999, p. 101). This is made more difficult where a bioregion has become the site of competition

for limited resources in a rapidly urbanising region. As Kelly and Adger's (2000) classic study in the Red River Delta in northern Vietnam demonstrates, the privatisation of state-managed cooperatives, the shift to aquaculture, and the enclosure and conversion to other agricultural uses of mangrove forests spelled disaster for poorer households, who were displaced from their traditional livelihoods in coastal and offshore fisheries and rendered more vulnerable to being battered by tropical cyclones or typhoons. Nonetheless, reconceptualising borderlands as distinct ecological units that span national boundaries may be one way of reworking how we think about cross-border environmental disasters.

Another possibility is to rework the concept of *humanitarian corridors*. To date, humanitarian corridors have mostly been applicable to conflict situations such as civil wars where INGOs are attempting to facilitate the safe transit of humanitarian aid in and refugees out of the crisis region. This has not been universally popular. Aid workers worry that there is a risk of humanitarian corridors becoming politicised, notably in the service of opposition forces who see them as a way of improving their strategic territorial position. Nonetheless, there are some scattered cases of humanitarian corridors being successfully implemented during and in the aftermath of natural disasters. For example, during the catastrophic 2010 earthquake in Haiti, a humanitarian corridor, both by land and sea, was opened between Port-au-Prince and Santo Domingo, the capital of the Dominican Republic. Santo Domingo served as an international logistics centre for cargo planes ferrying aid packages, which were then transported along the corridor, crossing the open border at Jimani. In reconceptualising such corridors within the context of cross-border environmental disasters, it might make sense to expand the emphasis from the transit of material aid such as food, water and medical supplies to the movement of people displaced by the disaster. A parallel situation is the Syrian diaspora; Giusy Nicolini, the mayor of Lampedusa, a small island at the southernmost tip of Italy that receives many fleeing from North Africa, has advocated the creation of humanitarian corridors to transport and distribute migrants across Europe (Palet 2016). In cross-border environmental disaster situations, such corridors might prove useful in moving those who have been displaced from their homes to temporary settlements in third nations more amenable to their ethnic, religious or linguistic identities.

5.7   Conclusion

As Miller and Douglass (2015, p. 1) have observed, compound environmental disasters produce disruptions that cannot easily be contained within existing political jurisdictions, necessitating the emergence of progressive trans-border networks, relationships and connections based upon common problems, ideas, knowledge and technologies within and among nation-states. In the immediate term, there are a number of specific measures that can be implemented in an effort to collaboratively deal with the effects of disasters that traverse sovereign territories: intercity aid networks, sub-national administrations in border regions, temporary protected

status designation, and perhaps even the establishment of humanitarian corridors for environmentally displaced migrants. In the longer term, however, it is crucial that nations in Asia and the Pacific reconceptualise the meaning of borders and border populations. In particular, we need to visualise these in spatial, sociological, and ecological terms, imagining for example, the existence of borderlands as both distinct bioregions and liminal zones possessing both greater freedom and inclusivity.

In so doing, disaster researchers might profit from expanding their horizons to other allied fields of research, notably those related to diaspora, migration and refugee settlement. Increasingly millions of people displaced by war and internal strife reside in temporary camps, some of which have been in existence for decades. Most of these camps are situated well within national borders, but others can be found offshore (Australia) or at transit points between nations (Calais, France). Inner cities in South Africa are full of economic migrants from across Africa. Living a kind of 'tactical citizenship' and lacking a legible legal identity, they reside in a 'liminal' world, suspended somewhere between the formal and informal city, where applying 'good governance' principles is not a very effective policy option (Kihato 2017). In both of these cases, borders are as much a state of mind as a matter of legal and political jurisdiction. Natural disasters of the future, especially those that are environmentally linked, are likely to create massive numbers of temporary migrants, many of whom will find their way into cities. Coping with this will require transcending conventional disaster planning approaches and undertaking a more fundamental rethinking of the nature of boundaries, citizenship and livelihoods. As I have suggested in this chapter, one possibility here is to visualise borderlands as 'spaces of hope' rather than catchment areas for those trapped by disasters that defy borders.

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