Sendai five years on: reflections on the role of international law in the creation and reduction of disaster risk

Int J Disaster Risk Sci (2020) 11:230–238
https://doi.org/10.1007/s13753-020-00265-y

www.ijdrs.com
www.springer.com/13753

ARTICLE

Sendai Five Years on: Reflections on the Role of International Law in the Creation and Reduction of Disaster Risk

Marie Aronsson-Storrier[1]

Published online: 20 April 2020

Abstract This article offers a critical examination of the position of the Sendai Framework for Disaster Risk Reduction 2015–2030 within international law. It is argued that any interrogation into the relationship between international law and disaster risk reduction (DRR) must begin not with existing DRR laws and policies, but rather with an enquiry into the nature of disaster risk and the role of international law in its creation and reduction. It is demonstrated how, while areas such as international human rights law can be utilized to enforce obligations in support of DRR, other areas—in particular international investment law—actively work to undermine DRR efforts. In order for international law to be a productive tool in the reduction of disaster risk, international lawyers must engage with critical work in disaster studies and explore the role that international law has played, and can play, in creating and addressing hazards, vulnerabilities, and capacities.

Keywords Disaster risk creation · Disaster risk reduction · International law · Sendai Framework

1 Introduction

Five years into the Sendai Framework for Disaster Risk Reduction 2015–2030's (UN 2015) 15-year span, it is time to take stock of the progress that has been achieved so far and the limits of the Framework's implementation. While some progress has been made, it is clear that much still needs to be done in order to achieve the Sendai Framework's seven targets and expected outcomes. As part of this process it is essential to engage critically with the underlying reasons for disaster risk and the role of international law in creating and reinforcing them. Therefore, rather than elaborating upon the emerging body of scholarship that identifies existing obligations in international law in support of disaster risk reduction (DRR), this article considers the relationship between international law and DRR more broadly.

The identification, or mapping, of existing DRR obligations is an essential exercise as international law can play a vital role in enforcing aspects of the Sendai Framework. However, while much work remains to be done in order fully to identify and understand how existing legal obligations can be applied and interpreted in relation to DRR, it is time for legal scholars to move beyond this mapping exercise and also engage more critically with the relationship between international law and disaster risk. Rather than focussing on the implementation of specific provisions, any interrogation into the role of law in DRR must start with an enquiry into the nature of disaster risk. The need better to understand disaster risk in all its dimensions is clearly set out in the Sendai Framework (Priority 1). It is argued here that in order for international law to be a productive tool in the reduction of disaster risk, international lawyers must also explore the role that the law has played—and can play—in creating and addressing hazards, vulnerabilities, and capacities. In doing so, it is helpful to turn to the conception of risk as identified by critical works in disaster studies.

The next section discusses the way in which international investment law undermines DRR by supporting the creation of disaster risk, whereas Sect. 3 illustrates how the Sendai Framework's focus on domestic DRR measures and

✉ Marie Aronsson-Storrier
e.m.l.aronssonstorrier@reading.ac.uk

[1] School of Law, University of Reading, Reading RG6 6EP, UK

"cooperation" ignores these processes. Section 4 discusses on a slightly more positive note how international law, including human rights law, plays an important role in reducing disaster risk, and Sect. 5 looks ahead towards a more progressive agenda for international law and DRR, before Sect. 6 offers some concluding thoughts.

2 International Law and Disaster Risk Creation

International law plays important roles in both the reduction and creation of disaster risk. As observed by David Kennedy, "international law is […] part of the glue that holds people, positions, and places in dynamic relations with one another, the sinews that link centres and peripheries, and the cloak that obscures the dynamic operations of hierarchy" (Kennedy 2013, p. 47).

For the purposes of this article, I will use the conceptualization of disaster risk developed in Wisner et al.'s (2003) *At Risk*, that is: [DR = H × (V/C) − M] [Disaster risk = Hazard × (Vulnerability/Capacity − Mitigation)] (see also Hewitt 1983; Lewis 1999; Oliver-Smith et al. 2009; Wisner et al. 2012). In this formulation, law is mentioned as part of "mitigation" efforts, as a way of alleviating the risk created by hazards and vulnerability. At first glance, this is similar to the way in which law is perceived in the Sendai Framework, in particular as it relates to Target (e) (on national and local DRR strategies). However, when the model is considered together with conceptualizations of vulnerability (and, indeed, hazards), it becomes clear that law is intrinsic in all aspects of this disaster risk equation.

When analyzing the external influences, and thus the role of "the international" within "the domestic," it is helpful to recall the Pressure and Release (PAR) model as originally published in *At Risk* (Blaikie et al. 1994; Wisner et al. 2003). The PAR model maps out the processes involved in the "progression of vulnerability" and how they interrelate with hazards to create disaster risk. Starting with root causes—such as the distribution of power, wealth and resources, neoliberalism, and colonial and postcolonial heritages—and illustrating how these are channeled "into particular forms of unsafe conditions" through "dynamic pressures," the model also demonstrates how some of the processes contribute to hazards. The PAR model is but one—admittedly simplified as stated by its authors—illustration of how root causes of vulnerability transform into disaster risk. However, the model's simplicity and clarity provides a powerful basis for initial considerations of the relationship between DRR and international law. In particular, the model illustrates the importance of examining how international law contributes to the progression of vulnerability, and, ultimately, how law can be used to turn the process around in a "progression to safety" and minimization of hazards (that is, to achieve "Release").

In order productively to reduce disaster risk, it is essential to explore and address how international law has created and is reinforcing the structures introduced in the PAR model. That is, to what extent does the current international legal system allow for the transmission of historical inequalities into present day disaster risk? The answer is, unfortunately, that it does so to a significant extent, particularly through its support of the current global economy. The structure—and following from it the substance—of international law is not only built upon a separation of the "domestic" and the "international," but also seeks to distinguish between the "private" and the "public." Questions around public interests and quests of social justice are separated from the regulations of the global economy, resulting in a global economy that "functions in a manner that imposes needless risk on the wider international society and on those least likely to benefit" (Linarelli et al. 2018, p. 226).

The ways in which international law perpetuates disaster risk is particularly visible in international investment law. In relation to the Sendai Framework's focus on the responsibility of the state to reduce disaster risk on its territory discussed below, it is necessary to acknowledge that international investment law has been constructed so as to protect multinational corporations "from the control of developing states in their capacity to advance the interest of their public" (Linarelli et al. 2018, p. 147). Of particular importance here is the use of "stabilization clauses." These clauses are common in foreign investment contracts, and protect the investor from any future legal changes in the host state. Justified on the basis of predictability and protection of investment, stabilization clauses prevent states from updating their laws in line with new scientific progress in areas such as disaster risk, environmental protection, and climate change (Ruggie 2011; Newdick 2016).

As if this was not enough, international investment arbitration is generally a one-sided affair, leaving only the investors with the right to initiate proceedings against host states, with the states only able to produce counterclaims. In other words, a state cannot sue a foreign investor for damage done to its territory or population under this regime (Jain 2019). It also needs to be noted here that the development of regional and bilateral investment treaties, and to an even greater extent the arbitration tribunals, are generally highly exclusionary processes shielded from public scrutiny. The way in which foreign investment rules are being developed and applied (not to say abused) outside of the public eye actively excludes the affected persons and communities who have to live with the consequences of a fraught system. There is clear evidence that the current

investor-state dispute settlement system primarily benefits the large companies and extremely rich individuals at the expense of states and their taxpayers (Van Harten and Malysheuski 2016).

The challenges posed to DRR by international investment law are clearly illustrated when considering actions brought against states on the basis of the Energy Charter Treaty (ECT), "the most litigated investment agreement in the world" (European Commission 2019, for a list of signatories, see International Energy Charter 2020b). Concluded in 1994 and entered into force in 1998, it is widely agreed that the ECT is in need of an update. However, suggestions for reform have thus far steered clear of the significant questions of the nature of the investor-state dispute settlement system and the need for environmental protection and climate change mitigation (Voon 2019).

The ECT has frequently been used by investors to prevent states from developing laws and policies in support of environmental protection and climate change mitigation. The case of *Rockhopper v Italy* serves as a poignant example. In February 2016, the Italian Ministry of Economic Development refused to grant Rockhopper Exploration the Production Concession covering the Ombrina Mare field in the Adriatic Sea. The decision followed Italy's reintroduction of a general ban on new oil and gas exploration and production activity projects within 12 miles of the Italian coastline (Italian Parliament 2015). The ban was based on a combination of environmental concerns, livelihoods based on fisheries and tourism, public resistance, and earthquake risks (Verheecke et al. 2019, p. 56). In March 2017, Rockhopper filed a claim against Italy before the International Centre for Settlement of Investment Disputes under the ECT in relation to the Ombrina Mare project (Rockhopper Exploration PLC 2017). Despite Italy's withdrawal from the ECT being effective as of 1 January 2016 (International Energy Charter 2020a), the claim is made possible due to Article 47(3) ECT, which provides that the ECT "shall continue to apply to Investments made in the Area of a Contracting Party by Investors of other Contracting Parties […] as of the date when that Contracting Party's withdrawal from the Treaty takes effect for a period of 20 years from such date." This "survival clause" is particularly significant since Rockhopper, as is common in this type of disputes, does not only claim compensation for losses, but also for hypothetical benefits that could have been made had concession been granted (Verheecke et al. 2019, p. 57). The case, which is still pending at the time of writing, is of particular interest considering the Italian decision in February 2019 to ban all new oil and gas exploration projects for an 18-month period, which will likely lead to numerous new investor-state disputes (Tamma 2019).

The ECT is just one of over 3000 international investment agreements, most of which leave open the question of how investment should be balanced against public interests and environmental protection to the arbitration tribunals (Baltag 2018). Returning to the PAR model, it is clear that the current system of international investment law acts in support of the root causes (such as neoliberalism and, arguably, imperialism) and dynamic pressures of vulnerability, while also contributing to—and preventing states from taking measures against—the existence of hazards (Wisner 2020). This said, it might be possible to see at least a small shift in the way in which trade and investment is balanced against risk creation—at least as concerns environmental protection. One example is the Central America-Dominican Republic Free Trade Agreement (CAFTA-DR) (U.S. Department of Homeland Security 2004), between Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and the United States of America, which clearly recognizes "the right of each Party to establish its own levels of domestic environmental protection and environmental development policies and priorities, and to adopt or modify accordingly its environmental laws and policies" (Article 17.1) and "that it is inappropriate to encourage trade or investment by weakening or reducing the protections afforded in domestic environmental laws" (Article 17.2(2)). In other words, there is a clear obligation not to establish a "race to the bottom" in terms of environmental regulations in order to attract business. This is a step in the right direction. There is also a growing body of legal scholarship that explores ways to challenge the current system of international investment law in the name of environmental protection and public interest (Desierto 2015; Slater 2015; Linarelli et al. 2018).

3 The Sendai Framework and the Myth of Domestic Powers

Whereas the international component of disaster response is frequently acknowledged, DRR is often perceived as a predominantly domestic affair by international lawyers (Eburn et al. 2019). It is, of course, imperative that existing international policies are implemented into domestic laws, policies, and practices. The importance of this is clearly identified in Target (e) of the Sendai Framework, which aims to "substantially increase the number of countries with national and local disaster risk reduction strategies by 2020." Progress is to be measured according to the "number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030" (Indicator E-1), as well as the "percentage of local

governments that adopt and implement local disaster risk reduction strategies in line with national strategies" (E-2). As with the other targets of the Sendai Framework, states are being measured on their progress as set out in the Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction (UNISDR 2017).

However, the assumption that domestic political authorities can achieve DRR is problematic in a number of ways. The first problematic assumption is that the government of a state has control over its territory and population (see, for example, Fitzpatrick and Compton (2019) regarding how this assumption has led to unfortunate outcomes in the Philippines). Second, and of central importance to the discussion in this article, there is an assumption that governments have control over the ways in which disaster risk within their territory is affected by the global economic system, and that any existing inequalities between states in relation to the ability to address disaster risk can be solved through cooperation with and—if needed—financial support by other states. As argued by Arthur Watts (2001, p. 10), "the consequences of globalization cannot be adequately regulated by reference to a legal order which is based on sovereignty and territory, the very concepts that are being outmoded by that same globalization."

While not a surprising starting point for a global policy instrument, the reliance on the capacities of the domestic state is highly problematic as it fails to account for wider processes of the creation of risk. As identified by David Kennedy, there exists "a rupture between a local and national politics on the one hand and a global economy and society on the other" (Kennedy 2013, p. 12) and "government everywhere is buffeted by economic forces, captured by economic interests, engaged in economic pursuits" (Kennedy 2013, p. 19). As argued by Christopher Newdick, "this is the 'governance gap' separating national politics from global economics which is having such profound effects on governments' capacity to protect social and economic rights" (Newdick 2016, p. 30. See also Korbin 2008).

The expected outcome of the Sendai Framework as set out in Paragraph 16 is "the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries." It is further clarified in the Paragraph that "the realization of this outcome requires the strong commitment and involvement of political leadership in every country at all levels in the implementation and follow-up of this framework and in the creation of the necessary conducive and enabling environment."

Paragraph 16 is a clear example of the assumption that domestic political leadership is in charge of how risk is created as well as addressed, and that what is needed is for each and every state to live up to its obligations. At the same time, it should be acknowledged that the Sendai Framework does recognize that action must take place at all scales and that the "circumstances and capabilities" of developing countries need to be considered. As stated in Paragraph 19(a):

> The reduction of disaster risk is a common concern for all States and the extent to which developing countries are able to effectively enhance and implement national disaster risk reduction policies and measures in the context of their respective circumstances and capabilities can be further enhanced through the provision of sustainable international cooperation.

While arguably an acknowledgment of the unequal status quo, this guiding principle does little to solve the issues discussed above. At best it can work as a normative reference point in necessary discussions around the changes in global governance that will need to take place in order to reduce disaster risk. Cooperation between states is important and can certainly produce some positive outcomes. However, the risk situation in a state, and its ability to address it, needs to be considered together with the position of the state in the global (political) economy, which cannot simply be "solved" through cooperation (for example, see Saunders et al. 2020 for Aotearoa New Zealand).

4 Turning the Wheel? Regulating Disaster Risk Reduction

There is a small but growing body of international law and international legal scholarship that identifies the ways in which law can support DRR. Although the Sendai Framework is broadly considered the central international policy instrument for DRR, the Framework and its predecessors—the 1994 Yokohama Strategy and Plan of Action for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation (UN 1994), and the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters (UN 2005)—have thus far received limited attention by legal scholars. This has slowly started to change in recent years, but DRR still holds what can be conceived of as a secondary status within what is often called "international disaster law" (IDL), which has developed primarily through the need to organize the rights and duties of various actors in disaster response, before slowly beginning to

also include responsibilities relating to DRR. The position of DRR within IDL is clearly illustrated in the International Law Commission's (ILC) Draft Articles on the Protection of Persons in the Event of Disaster (ILC 2016), where the inclusion of DRR initially was met by suspicion on behalf of a number of states before it was finally included within the scope of the Draft Articles, with Draft Article 9 being dedicated to DRR (Aronsson-Storrier 2019; Pronto 2019). Although the incorporation of DRR into the ILC Draft Articles is a significant step in the right direction, it is clear from the wording of Draft Article 9 and its commentary that the Commission was reluctant to engage with the contemporary understanding of disaster risk (Aronsson-Storrier 2019), thus illustrating an urgent need for closer engagement between international legal scholarship and disaster studies.

Due to the Sendai Framework's non-binding nature, much effort by international legal scholars in recent years has been made to identify existing obligations in international law to reduce disaster risk. The two main ways in which international lawyers working on DRR have sought to establish such obligations is first through the identification of a customary international norm based on existing agreements, national policies, and practices of states (see, especially, ILC 2016, commentary to Draft Article 9); and secondly through the identification of relevant obligations in other areas of international law, primarily human rights and international environmental law (Peel and Fisher 2016; Samuel et al. 2019). The European Court of Human Rights (ECtHR) has also stressed in a number of judgments how a failure to take preventative measures to address a "natural" or "human made" hazard resulting in a disaster can be considered a breach of the right to life (see, for example, ECtHR 2004 and 2008).

Just as international investment law heavily supports the "Pressure" side of the PAR model, other areas of international law can act in support of the "Release" side and thus be of help in the movement away from disaster risk. Turning first to hazards, these can be of human or natural origin, or, in some cases, a combination of natural and human processes. With climate change and its effects on weather and sea-level rise as one obvious example, other human activities such as hydraulic fracturing (fracking) can also contribute to the exacerbation of natural hazards such as landslides and earthquakes (Wilson et al. 2015). The human contribution to hazards is perhaps most clearly regulated in international environmental law (Peel and Fisher 2016).

Turning to vulnerabilities and capacities, international human rights law is particularly relevant. Significant discussion has centered on a human rights-based approach to DRR, and the Sendai Framework highlights the importance of human rights in paragraph 19(c) (Enarson and Fordham 2001; Cubie 2014; da Costa and Pospieszna 2015; Lauta 2015, 2016; Aronsson-Storrier 2017; Sossai et al. 2018; Hesselman et al. 2019). A human rights-based approach to DRR certainly has its merits. For example, it is in international human rights law that we can find obligations for states to take positive measures to save lives. The Human Rights Committee—tasked with overseeing the implementation of the International Covenant on Civil and Political Rights—recently clarified that "environmental degradation, climate change and unsustainable development" are now among "the most pressing and serious threats" to the right to life (Human Rights Committee 2018, Paragraph 62). There is also increasing incorporation of DRR into the work of the UN human rights treaty bodies, in particular by the Committee on the Elimination of Discrimination against Women (CEDAW), which in 2018 adopted a General Recommendation on the "Gender-Related Dimensions of Disaster Risk Reduction in the Context of Climate Change" (CEDAW 2018).

Human rights law further supports the "Release" side of the PAR model through requiring participation in decision making as well as specific instruments that protect marginalized groups such as women, children, persons with disabilities, and racial minorities (UN 1965, 1979, 1989, 2006) and establishes the binding principle of non-discrimination (as set out, for example, in the International Covenant on Civil and Political Rights (Article 2) and the International Covenant on Economic, Social, and Cultural Rights (Article 2(2)). If implemented fully, these instruments would make a significant difference to marginalized persons affected by disaster.

At the same time, it must be remembered that, while each and every person has human rights by the virtue of being human, the specific rights, as well as the ability to access them, depend on the legal status of a person in any given situation. As is so often the case, it is the most marginalized persons who miss out the most, and in many instances women and/or sexual minorities, as well as persons with disabilities, are excluded from decision and law making processes (UNDRR 2019a).

Another commonly acknowledged weakness of international human rights law is that it only binds states. The system is built in such a way that states are the primary duty bearers, which need to "protect, respect and fulfil" human rights for their peoples (UN Human Rights Council 2011, Article 1), and part of the obligation to protect contains an obligation to prevent human rights breaches by third parties in accordance with the principle of due diligence (UN Human Rights Council 2011, Article 4). Efforts have been made to directly impose human rights obligations on private actors, most significantly through the UN Guiding Principles on Business and Human Rights (UN Human Rights Council 2011). The Guiding Principles,

while not binding, suggest that while businesses do not have the same level of human rights obligations as states, they must still "respect" them. As set out in Article 11, the obligation to respect means that businesses "should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved." Finally, it should be noted here that post-disaster dispute resolution and compensation, such as happened following the 1984 Bhopal disaster, the 2010 BP oil spill, or the 2015 Samarco disaster (Hill-Cawthorne et al. 2016; Costa 2017) are of critical importance for DRR. However, the opportunities to hold multinational corporations to account remain limited (see, especially, Costa 2017).

Despite their significance, too strong a focus on human rights in DRR can lead to "conveniently" ignoring other aspects of risk. In *The Misery of International Law* Linarelli et al. (2018) illustrate the dangers of relying on human rights in the quest for social justice. They argue that the human rights project has further contributed to the problematic distinction between the public and the private and allowed international investment and other areas of law to separate themselves from any questions of social justice. While acknowledging that human rights are an important tool in the fight for social justice, they observe how participation in the UN human rights system takes place in the service of the neoliberal project. Positioned along similar lines, Susan Marks' (2011) writings on human rights and root causes are particularly well-suited for an international law analysis in line with the PAR model. Noticing the increasing attention paid to root causes of human rights abuses, Marks observes that such discussions, while not without value, generally stop short of engaging with "the conditions that engender and sustain" existing vulnerabilities, which in turn results "in an emphasis on technical problems and solutions" (Marks 2011, p. 71). The critique is hauntingly similar to that of the Sendai Framework's focus on technological solutions and (multi) hazards, rather than "multi-vulnerabilities" (Kelman 2015).

It is clear from the above that international human rights law, while essential, is "not enough" (Moyn 2018, p. xii). However, it would be a mistake to completely disregard the possibilities of the human rights system to bring about positive change. Marks (2011), in my view rightly, recognizes the importance of existing work on the implementation of human rights. Her comments serve as a good reminder of the importance of working on different time scales when addressing not only human rights, but also DRR. While there is a clear need to engage with larger systemic questions, it is also essential to use existing tools to achieve as much progress as possible within the existing constraints. Further, and importantly, there is a need for engagement and mutual respect and acknowledgment of the different types and aims of work conducted.

5 Looking Ahead: A Progressive Agenda for International Law and Disaster Risk Reduction

International law is at once a result and a vehicle of politics, which means that it can be a driver of change. As mentioned above, thus far international lawyers writing on DRR have focused on identifying—and in some cases developing—obligations for states to take positive measures to reduce disaster risk. This is absolutely crucial in a situation where DRR measures sometimes are framed as optional and where there is a clear need to build synergies between various areas of law on international, regional, and national levels and working with governments in the development and implementation of their DRR laws and policies.

The next step is to move further afield to look at international legal structures more broadly. (Linarelli et al. 2018, p. 1) argue that although "international law cannot end underdevelopment or eradicate poverty and unjustifiable material inequality […] it is a precondition of achieving those objectives that the means by which law creates wrongs are removed." Without the removal or adjustment of many of the existing unjust rules and structures, significant parts of international law will continue to work against DRR even as, simultaneously, positive legal obligations become more clearly identified and understood.

This said, for all the importance of imagining a more just international legal system and global economy, such exercises are of little help for people currently bearing the burden of disaster risk. Simultaneously to challenging the larger structures in a quest to remove the injustices of international law, we must also consider what tools are available to us to make positive progress—albeit on a smaller scale. While admittedly open to the critique of putting the burden on the affected, it is worth considering the avenues available for resistance. As discussed above, human rights law is one avenue. As scientific evidence of the effects of environmental degradation and disaster vulnerability on the enjoyment of rights emerges and crystallizes, the human rights arena has become increasingly open to challenges of significant value for DRR.

The problem with the international human rights law avenue is that it remains relatively inaccessible; it is important to acknowledge that most persons in the world affected by disaster risk do not have access to the resources necessary to bring about such challenges. The same is true for participation in the country reviews under the Human

Rights Council and various UN Human Rights Treaty Bodies.

The importance of "voice," in particular one with direct effect on the development and interpretation of international law, must not be understated. One thing that the Sendai Framework gets—at least partially—right is the strong focus on the importance of participation of various actors in DRR processes (see for example, Paragraphs 14, 19(d), and 26, but see also critique of the shrinking space and respect for local communities in Tozier de la Poterie and Baudoin (2015). Civil society organizations, non-governmental organizations, academics (and local governments) are now invited to publicize their plans and commitments in relation to the Sendai Framework on the Voluntary Commitments site hosted and created by the UNDRR (2019b, 2020). Part of the "all participation approach" of the Sendai Framework, the Voluntary Commitments site lets non-state actors involved in DRR activities publicize their commitments and share best practices, while also being given an opportunity to find potential partners for collaboration. The site opened in December 2018, and so far only a small number of organizations have participated (UNDRR 2019b). It is argued here that this tool should not be underestimated and it can become a hub not only for best practices in community DRR measures, but also for resistance against disaster risk creation. There is nothing in the description of the Voluntary Commitments platform, or its guidance (UNDRR 2018) that excludes practices of resistance. The Voluntary Commitments will be reported at the Global Platform for Disaster Risk Reduction, so utilizing the site to share such practices further has the benefit of providing a much-needed critical voice there. In order to make the most of this opportunity, and due to the fragmented nature of international law, academics here have an important role in encouraging relevant organizations to submit their commitments, even where they themselves may not consider their activities to be focused specifically on DRR. In this way, bridges between various actors can begin to be built beyond the DRR sphere.

This is not to say that the Voluntary Commitments should be limited to acts of resistance; there are many best practices out there to be shared in relation to more positive DRR measures, particularly as concerns participation and respect for nature's own responses. Rather, it is a reminder of the importance of utilizing any forum available in order to reduce disaster risk for those it affects the most.

Meanwhile, further synergies are needed between scholarship of disaster studies and international legal scholarship. International lawyers need to be better informed about the (social) construction and production of risk in order to guide our enquiries in the necessary direction. At the same time, scholars in the broader field of disaster studies must not shy away from engaging with international law. An understanding of the workings of international law and its position in the broader political and economic structures is, for better or worse, necessary in order to achieve the changes needed.

6 Concluding Thoughts

It is clear that there is a need to fight to undo the injustices imposed by international law that contribute to all various stages and aspects of vulnerability, as well as contribute to and create hazards. At the same time, it is essential not to let the enormity of that task discourage more direct action on a smaller scale. The Sendai Framework offers some progressive developments through a small number of provisions. As is often the case with non-binding instruments, it also benefits from a high level of detail as to its content as well as implementation through the indicators, terminology, and technical guidance, and its importance should by no means be understated. Still, a non-binding "roadmap" is unlikely to transform the world. Rather, strategic interventions and challenges to the status quo through scholarship, activism, and strategic litigation are likely to have more significant effects moving forward.

References

Aronsson-Storrier, M. 2017. Sanitation, human rights, and disaster management. *Disaster Prevention and Management* 26(5): 514–525.

Aronsson-Storrier, M. 2019. Beyond early warning systems: Querying the relationship between international law and disaster risk (reduction). *Yearbook of International Disaster Law* 1(1): 51–69.

Baltag, C (ed.). 2018. Human rights and environmental disputes in international arbitration. *Kluwer Arbitration Blog*, 24 July 2018. https://arbitrationblog.kluwerarbitration.com/2018/07/24/human-rights-and-environmental-disputes-in-international-arbitration/. Accessed 26 Mar 2020.

Blaikie, P., T. Cannon, I. Davis, and B. Wisner. 1994. *At risk: Natural hazards, people's vulnerability, and disasters*, 1st edn. London: Routledge.

CEDAW (Committee on the Elimination of Discrimination against Women). 2018. General recommendation No. 37 on gender-

related dimensions of disaster risk reduction in the context of climate change. UN Doc CEDAW/C/GC/37, 7 February 2018.
Cubie, D. 2014. Promoting dignity for all: Human rights approaches in the post-2015 climate change, disaster risk reduction and sustainable development frameworks. *Human Rights and International Legal Discourse* 8(1): 36–51.
da Costa, K. 2017. Corporate accountability in the Samarco chemical sludge disaster. *Disaster Prevention and Management* 26(5): 540–552.
da Costa, K., and P. Pospieszna. 2015. The relationship between human rights and disaster risk reduction revisited: Bringing the legal perspective into the discussion. *Journal of International Humanitarian Legal Studies* 6(1): 64–86.
Desierto, D. 2015. *Public policy in international economic law*. Oxford: Oxford University Press.
Eburn, M., A. Collins, and K. da Costa. 2019. Recognising limits of international law in disaster risk reduction as problem and solution. In *The Cambridge handbook of disaster risk reduction and international law*, ed. K.L.H. Samuel, M. Aronsson-Storrier, and K.N. Bookmiller, 107–127. Cambridge: Cambridge University Press.
ECtHR (European Court of Human Rights). 2008. *Budayeva and others v. Russia*. Apps nos. 15339/ 02, 21166/ 02, 20058/ 02, 11673/ 02 and 15343/ 02, 20 March 2008.
ECtHR (European Court of Human Rights). 2004. *Öneryildiz and others v. Turkey*. Apps no. 48939/ 99, 30 November 2004.
Enarson, E., and M. Fordham. 2001. From women's needs to women's rights in disasters. *Environmental Hazards* 3: 133–136.
European Commission. 2019. Energy Charter Treaty modernisation: European Commission presents draft negotiating directives. Brussels: European Commission. https://trade.ec.europa.eu/doclib/press/index.cfm?id=2017. Accessed 14 May 2019.
Fitzpatrick, D., and C. Compton. 2019. Disaster risk reduction and the state: The failure of no-build zones after Typhoon Haiyan. In *The Cambridge handbook of disaster risk reduction and international law*, ed. K.L.H. Samuel, M. Aronsson-Storrier, and K.N. Bookmiller, 295–312. Cambridge: Cambridge University Press.
Hesselman, M. 2019. Access to disaster risk information, early warning and education: Implementing the Sendai framework through human rights law. In *The Cambridge handbook of disaster risk reduction and international law*, ed. K.L.H. Samuel, M. Aronsson-Storrier, and K.N. Bookmiller, 188–216. Cambridge: Cambridge University Press.
Hewitt, K. (ed.). 1983. *Interpretations of calamity from the viewpoint of human ecology*. London: Allen & Unwin.
Hill-Cawthorne, L. 2016. Dispute settlement in the aftermath of disaster. In *Research handbook on disasters and international law*, ed. S. Breau, and K. Samuel, 501–529. Cheltenham, UK: Edward Elgar Publishing.
Human Rights Committee. 2018. General comment No. 36 on Article 6 of the International Covenant on Civil and Political Rights, on the right to life. UN Doc CCPR/C/GC/36, October 2018.
ILC (International Law Commission). 2016. Draft articles on the protection of persons in the event of disasters. Adopted on second reading by the Drafting Committee. UN Doc. A/CN.4/L.871, 26 May 2016.
International Energy Charter. 2020a. Italy. https://www.energycharter.org/who-we-are/members-observers/countries/italy/. Accessed 31 Jan 2020.
International Energy Charter. 2020b. The Energy Charter Treaty. https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/. Accessed 31 Jan 2020.
Italian Parliament. 2015. Law No. 208 of 28 December 2015 (2016 Budget Law). Published in Official Gazette No. 302, Ordinary Supplement No. 70.
Jain, S. 2019. Bridging the gap between investment arbitrations and environmental concerns: Can inclusion of counterclaims help? *The American Review of International Arbitration* 30. https://aria.law.columbia.edu/bridging-the-gap-between-investment-arbitrations-and-environmental-concerns-can-inclusion-of-counterclaims-help/#_ftn1. Accessed 26 Mar 2020.
Kelman, I. 2015. Climate change and the Sendai framework for disaster risk reduction. *International Journal of Disaster Risk Science* 6(2): 117–127.
Kennedy, D. 2013. Law and the political economy of the world. *Leiden Journal of International Law* 26(1): 7–48.
Korbin, S. 2008. Globalization, transnational corporations and the future of global governance. In *Handbook of research on global corporate citizenship*, ed. A. Schere, and G. Palazzo, 249–272. Cheltenham, UK: Edward Elgar Publishing.
Lauta, K.C. 2015. *Disaster law*. London: Routledge.
Lauta, K.C. 2016. Human rights and natural disasters. In *Research handbook on disasters and international law*, ed. S. Breau, and K. Samuel, 91–110. Cheltenham, UK: Edward Elgar Publishing.
Lewis, J. 1999. *Development in disaster-prone places: Studies of vulnerability*. London: Intermediate Technology Publications.
Linarelli, J., M. Salomon, and M. Sornarajah. 2018. *Misery of international law*. Oxford: Oxford University Press.
Marks, S. 2011. Human rights and root causes. *Modern Law Review* 74(1): 57–78.
Moyn, S. 2018. *Not enough: Human rights in an unequal world*. Harvard: Harvard University Press.
Newdick, C. 2016. Global capitalism and the crisis of the public interest – Sleepwalking into disaster. In *Research handbook on disasters and international law*, ed. S. Breau, and K. Samuel, 23–45. Cheltenham, UK: Edward Elgar Publishing.
Oliver-Smith, A. 2009. Anthropology and the political economy of disasters. In *The Political economy of hazards and disasters*, ed. E.C. Jones, and A.D. Murphy, 11–28. Plymouth, UK: AltaMira Press.
Peel, J, and D. Fisher (eds.). 2016. *The role of international environmental law in disaster risk reduction*. Leiden, Netherlands: Brill-Nijhoff.
Pronto, A.N. 2019. The ILC's articles on the protection of persons in the event of disasters and disaster risk reduction: A legislative history. In *The Cambridge handbook of disaster risk reduction and international law,* ed. K.L.H. Samuel, M. Aronsson-Storrier, and K.N. Bookmiller, 71–86. Cambridge: Cambridge University Press.
Rockhopper Exploration PLC. 2017. Commencement of International Arbitration. *RockHopper Exploration PLC News*, 23 March 2017. https://www.italaw.com/sites/default/files/case-documents/italaw8848.pdf. Accessed 26 Mar 2020.
Ruggie, J. 2011. Report of the Special Representative of the Secretary General on the issue of human rights and transnational corporations and other business enterprises. UN Doc.A/HRC/17/31/Add.3, May 25 2011.
Samuel, K.L.H., M. Aronsson-Storrier, and K.N. Bookmiller (eds.). 2019. *The Cambridge handbook of disaster risk reduction and international law*. Cambridge: Cambridge University Press.
Saunders, W., S. Kelly, S. Paisley, and L. Clarke. 2020. Progress toward implementing the Sendai Framework, the Paris Agreement, and the Sustainable Development Goals: Policy from Aotearoa New Zealand. *International Journal of Disaster Risk Science* 11(2). https://doi.org/10.1007/s13753-020-00269-8.
Slater, T.L. 2015. Investor-state arbitration and domestic environmental protection. *Washington University Global Studies Law Review* 14(1): 131–154.
Sossai, M. 2018. States' failure to take preventive action and to reduce exposure to disasters as a human rights issue. In *Routledge handbook of human rights and disasters*, ed. F.Z.

Giustiniani, E. Sommario, F. Casolari, and G. Bartolini, 119–131. London: Routledge.

Tamma, P. 2019. Italian clampdown on oil and gas exploration is a 5Star win. *Politico*, 11 February 2019. https://www.politico.eu/article/italian-clampdown-on-oil-and-gas-exploration-is-a-5star-win/. Accessed 26 Mar 2020.

Tozier de la Poterie, A., and M.A. Baudoin. 2015. From Yokohama to Sendai: Approaches to participation in international disaster risk reduction frameworks. *International Journal of Disaster Risk Science* 6(2): 128–139.

UN (United Nations). 1965. International convention on the elimination of all forms of racial discrimination. Adopted 21 December 1965, entered into force 4 January 1969. New York: UN.

UN (United Nations). 1979. Convention on the elimination of all forms of discrimination against women (1979). Adopted 18 December 1979, entered into force 3 September 1981. New York: UN.

UN (United Nations). 1989. Convention on the rights of the child (1989). Adopted 20 November 1989, entered into force 2 September 1990. New York: UN.

UN (United Nations). 1994. Yokohama strategy and plan of action for a safer world: Guidelines for natural disaster prevention, preparedness and mitigation, 27 May 1994. New York: UN.

UN (United Nations). 2005. Hyogo framework for action 2005– 2015: Building the resilience of nations and communities to disasters (22 January 2005) UN Doc A/CONF.206/ 6. New York: UN.

UN (United Nations). 2006. Convention on the rights of persons with disabilities (2006). Adopted December 13, 2006, entered into force May 3, 2008. New York: UN.

UN (United Nations). 2015. Sendai framework for disaster risk reduction 2015–2030. UN Doc A/ CONF.224/ CRP.1, March 18, 2015. New York: UN.

UNISDR (United Nations Office for Disaster Risk Reduction). 2017. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai framework for disaster risk reduction. Geneva: UNISDR.

UNDRR (United Nations Office for Disaster Risk Reduction). 2018. Sendai framework voluntary commitments: Guideline for submission. Geneva: UNDDR.

UNDRR (United Nations Office for Disaster Risk Reduction). 2019a. Global assessment report on disaster risk reduction 2019. Geneva: UNDDR.

UNDRR (United Nations Office for Disaster Risk Reduction). 2019b. Sendai framework voluntary commitments synthesis and analysis report 2019. Geneva: UNDDR.

UNDRR (United Nations Office for Disaster Risk Reduction). 2020. Voluntary commitments. https://sendaicommitments.unisdr.org/. Accessed 31 Jan 2020.

UN Human Rights Council. 2011. Guiding principles on business and human rights: Implementing the United Nations "protect, respect and remedy" framework. New York: United Nations.

U.S. Department of Homeland Security. 2004. Central America–Dominican Republic Free Trade Agreement, concluded 28 May 2004. https://www.cbp.gov/trade/free-trade-agreements/cafta-dr. Accessed 26 Mar 2020.

Van Harten, G., and P. Malysheuski. 2016. Who has benefited financially from investment treaty arbitration? An evaluation of the size and wealth of claimants. Osgoode Legal Studies Research Paper No. 14/2016.

Verheecke, L., P. Eberhardt, C. Olivet, and S. Cossar-Gilbert. 2019. Red carpet courts: 10 stories of how the rich and powerful Hijacked Justice. Brussels and Amsterdam: Friends of the Earth Europe and International, the Transnational Institute, and Corporate Europe Observatory.

Voon, T. 2019. Modernizing the energy charter treaty: What about termination? *Investment Ttreaty News,* 2 October 2019. https://www.iisd.org/itn/2019/10/02/modernizing-the-energy-charter-treaty-what-about-termination-tania-voon/. Accessed 26 Mar 2020.

Watts, A. 2001. The importance of international law. In *The role of law in international politics: Essays in international relations and international law,* ed. M. Byers, 5–16. Oxford: Oxford University Press.

Wilson, M.P., R.J. Davies, G.R. Foulger, B.R. Julian, P. Styles, J.G. Gluyas, and S. Almond. 2015. Anthropogenic earthquakes in the UK: A national baseline prior to shale exploitation. *Marine and Petroleum Geology* 68: 1–17.

Wisner, B. 2020. Five years beyond Sendai—Can we get beyond frameworks? *International Journal of Disaster Risk Science* 11(2). https://doi.org/10.1007/s13753-020-00263-0.

Wisner, B., P. Blaikie, T. Cannon, and I. Davis. 2003. *At risk: Natural hazards, people's vulnerability, and disasters,* 2nd edn. London: Routledge.

Wisner, B., J.C. Gaillard, and I. Kelman. 2012. Framing disaster: Theories and stories seeking to understand hazards, vulnerability and risk. In *The Routledge handbook of hazards and disaster risk reduction*, ed. B. Wisner, J.C. Gaillard, and I. Kelman, 18–33. London: Routledge.