



## Working paper 556

# Disaster risk reduction in conflict contexts

## The state of the evidence

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### Key messages

- This working paper reviews the state of the evidence on disaster risk reduction (DRR) in conflict-affected contexts. It is intended to stimulate a more explicitly political consideration of disaster and DRR studies, and to 'reroot' disaster studies in the political realm.
- Consideration of DRR in conflict raises important questions about normative conceptions of and approaches to DRR, including the centrality of the state, the position of national DRR policies and institutions as the primary entry point for effective risk governance and the assumption that stability and peace are prerequisites for undertaking DRR.
- The review identifies important gaps in the evidence which point to potential new directions in disaster–conflict research that simultaneously build on existing normative approaches, sidestep them and adopt new approaches and perspectives and push the boundaries of current knowledge on the relationships and interactions between DRR and conflict.

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## About this project

This working paper is part of the project ‘When disasters and conflict collide: uncovering the truth’, a collaboration between the German Federal Ministry of Economic Cooperation and Development (BMZ), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Overseas Development Institute (ODI). If you have evidence, ideas or stories to share on Disaster Risk Reduction in fragile and conflict affected contexts, please contact the lead researcher, Katie Peters ([k.peters@odi.org.uk](mailto:k.peters@odi.org.uk)).

More information on the project can be found at: [odi.org/disasters-conflict](https://odi.org/disasters-conflict).

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# 1 Introduction: disaster risk reduction and conflict

Disaster studies and the practice of disaster risk reduction (DRR) have long recognised the social construction of disasters and the political dimensions of disaster risk (Wisner et al., 2004). But too often the discipline of natural hazard-related disasters ('disasters') – both academic and practitioner in origin – fails to systematically consider conflict, treats conflict as an externality (Harris et al., 2013) or avoids any meaningful reference to it altogether, as in the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNISDR, 2015) and the accompanying definitions of disasters and disaster risk (UNISDR, 2017). Efforts to raise awareness that those most vulnerable to natural hazards also live in contexts affected by conflict and fragility, and critical insights into the disaster–conflict interface by academics, have had limited traction in shifting the political discourse, practical approaches or the focus of disaster research (Siddiqi, 2018; Harris et al., 2013; Peters and Budimir, 2016). The reasons for this have been explored elsewhere (see Peters, 2018).

Within disaster studies, much of the literature on the intersection of disasters and conflict starts with an individual hazard event and explores how disaster impacts affect dynamics of peace and conflict: whether increasing the intensity of conflict or leading to peaceful resolution (see Chapter 1). Even in studies that conceptualise disasters as a product of their environment, when researching disasters in conflict contexts there is a tendency to revert to treating the disaster event as an externality to the conditions of conflict. Although a wealth of literature explores different aspects of conflict, and even the disaster–conflict interface, from other sectors, paradigms or disciplines – such as food and livelihood security, foreign policy and complex political emergencies

– hazards, threats and risks are conceptualised in ways which do not speak directly to those concerned with the study, policy or practice of DRR. Thus, such insights rarely lead to changes in sub-national to international systems for DRR in conflict contexts (as shown, for example, in the case of drought risk management in Chad: Peters et al., 2019).

This review seeks to upend this by starting with disaster risk and DRR. In this narrative, the relationship between affected communities' vulnerabilities to conflict and disasters, and the social contract between the state and citizens, is key (see Chapter 2). Questions are raised about normative approaches to DRR practice, including state-centric approaches, and the necessity of 'peace'. Whether approaching disasters as events which 'occur in a political space' or as a 'direct product' of their environment (see Hannigan, 2012), disaster studies and practice cannot avoid considering issues of conflict. Conflict is 'natural, inevitable and often a positive part of development and other change processes' (OECD, 2018: 141). Conflict dynamics are thus part of the routine societal functioning and political environment in which disaster events happen, and/or one of the processes through which disasters occur. As such, the interface between disasters and conflict is a concern for us all.

This paper is an attempt to stimulate a more explicitly political consideration of disaster and DRR studies, and to 'reroot' disaster studies in the political realm (Maskrey, 1989; Wisner et al., 2004; Siddiqi, 2018; Gaillard, 2019). It is motivated by a desire to orient disasters studies to themes that reflect the contexts – and related challenges and opportunities – in which field-level efforts to support individuals affected by disasters and conflict take place. The paper explores

**Table 1 Geographical scale of reviewed literature**

Sub-national	National	Cross-national	Regional	Broad remit (literature which is abstract or theoretical and/or surveys a broad range of examples)
27	54	44	23	154

**Table 2 Reviewed literature with a specific geographic focus, by continent**

Americas	Asia	Europe	MENA	Sub-Saharan Africa
31	78	9	12	48

**Table 3 Reviewed literature by decade**

1970s	1980s	1990s	2000s	2010s
3	5	9	82	203

scholarly research and grey literature on disasters and DRR that specifically considers issues of conflict, including armed conflict, violence and fragility: its scope and breadth, areas of geographical, methodological and conceptual focus and gaps in scholarship that merit further consideration. Better understanding of the existing evidence base allows for more informed engagement with disaster risk and DRR in conflict contexts, and helps encourage and shape future research, policy and practice.

## 1.1 Methodology and structure

This review is comprehensive but not exhaustive. It is intended for DRR practitioners, policy-makers and donors. Using a keyword search,<sup>1</sup> more than 300 articles were identified, a combination of peer-reviewed journal articles, books and grey literature. The review is limited to the English language. Articles were reviewed and assessed on the basis of their relevance. A ‘topical’ approach was adopted, whereby the literature was reviewed and initial themes and concepts identified using the following categories: abstract, author-designated key words, geographic area, reviewer-designated key terms, type of natural hazard and type

of conflict (as described by the authors). The literature covered a range of scales (see Table 1) and geographies (Table 2), though there is a noticeable concentration on Asia, particularly Sri Lanka and Indonesia in relation to the 2004 Indian Ocean tsunami.

The literature was organised around topics, and 240 articles, books and other grey literature were assessed for more in-depth review. The topics were then organised into three themes, which subsequently became the organising structure for this paper (namely attribution and the intersection of disaster and conflict risk (Chapter 2); vulnerabilities and the social contract (Chapter 3); and the practicalities of DRR in conflict contexts (Chapter 4)). The authors recognise that these are not discrete, and links can be drawn between them.

### 1.1.1 Definitions

It is of scant use to retrofit uniform definitions, concepts and terms related to natural hazard-related disasters and conflict to published literature. We therefore primarily use the terms employed in the original literature as the authors intended them. For the most part, disaster studies defers to the UNDRR terminology guide supporting the implementation of the

<sup>1</sup> The key word search included various combinations of the following terms: disaster, disaster risk reduction, (natural) hazard, disaster risk management, natural disaster, prevention, preparedness, mitigation, reduction, response, recovery, reconstruction, flood, landslide, earthquake, wildfire, drought, cyclone, tsunami, conflict, (civil) war, violence, fragility, conflict prevention, conflict management, conflict sensitivity, conflict resolution, peace, ‘do no harm’ and security.

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Sendai Framework (UNISDR, 2017), which defines disasters as: ‘A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts’.

One of the challenges in writing this paper is that there are of course different ways of ‘seeing’ disasters and conflict, which determine how one views how disasters and conflict are interconnected; Richards (2005) and Kalyvas (2003) view conflict as a ‘process’ rather than focusing on its proximate causes, which allows us to ask why certain people are affected by conflict, crisis and disasters in the way they

are, and others are not. Understanding people as active social agents in dynamic processes of peace and conflict opens up space to consider the contribution of DRR institutions, actors and actions in ways that can also affect conditions of conflict and of peace.

While the idea of conflict being ‘inherent in all societies’ and part of a continuum is useful, to narrow the scope of the paper, we concentrate on ‘violent conflict’. The term ‘violent conflict’ denotes a variety of situations, including ‘interstate war, armed conflict, civil war, political and electoral violence, and communal violence, and can include many actors, including states and nonstate actors, such as militias, insurgents, terrorist groups, and violent extremists’ (UN and World Bank, 2018: 18).



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# 2 Attribution and the intersection of disaster and conflict risk

The scientific community across various disciplines, and practitioners and policy-makers, recognise the pressing need to explore the full spectrum of disaster impacts. While the social and political dimensions of disasters have been acknowledged and discussed for decades, empirical research on rapid-onset disasters<sup>2</sup> and conflict emerged more recently, in the 1990s, and became more rigorous in the 2000s (Nardulli et al., 2015). Since then, research on this topic has both expanded and splintered, with a disparate literature claiming that disaster can lead to conflict as well as cooperation. One of the few syntheses of existing literature on disasters and conflict (Xu et al., 2016) finds that disasters do not directly lead to social conflict, but can do so indirectly through their adverse impacts on society and by increasing social risk. However, the potentially mitigating role of DRR does not feature strongly in the literature.

The review presented in this chapter compiles and seeks to make sense of the literature addressing how disaster impacts conflict and peace, and the extent to which DRR actions can influence or mitigate those impacts. The first section includes an overview of the literature exploring the argument that disaster leads to conflict, and that activities surrounding disaster events can lead to a range of outcomes for conflict and peace. The rest of the chapter addresses climate-related disasters and conflict in relation to the climate–security nexus, which has received notable political and academic attention

over the past decade. The visibility and political weight this literature enjoys makes its inclusion in this review pertinent.

## 2.1 Do disasters lead to conflict?

The bulk of the literature addressing the relationship between disasters and conflict is concerned with whether disasters lead to conflict, or increase its intensity. It is primarily academic in nature, and tends to treat disasters as the primary instigator of changes which affect conflict and/or cooperation, rather than one of a number of variables linked in complex processes of interaction. In investigations of general relationships and correlations, disasters have been found to increase the risk of civil conflict in the short and medium term in low- and middle-income countries (Nel and Righarts, 2008). International conflict is also more likely in a post-disaster context (Nelson, 2010b). Examination of the relationship between disaster and conflict has also been extended to non-violent social conflict, such as wildfires in the American West leading to an increase in local social conflict (Carroll et al., 2006). In a study of disasters in the United States, Dynes and Quarantelli (1975) found that, while there is generally cooperation and collaboration in the emergency period following a disaster, (non-violent) conflict often increases in the post-emergency period. Building on this literature in a different setting, Oliver-Smith (1979) traces the ripple effects of an earthquake and avalanche

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2 Some argue that there are no rapid-onset disasters. For example, Lewis (1988) claims, ‘All disasters are slow onset when realistically and locally related to conditions of susceptibility’ (as cited in Kelman, 2008).

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in Peru in 1970, finding that individuals and society oscillate between consensus and conflict during the immediate and long-term processes of recovery and reconstruction. In another example of social mobilisation in the post-disaster space, Olson and Gawonski (2003) show how the 1972 earthquake in Nicaragua increased support for the Sandinista revolution that ultimately toppled the Somoza dictatorship (the relationship between disasters and political legitimacy is discussed below).

Various authors (e.g. Uzoechina, 2009; Walch, 2018) have suggested that disaster risk and conflict tend to be mutually reinforcing. However, the interplay between the two, as well as additional social, economic, political and environmental factors, makes interactions complex and difficult to disentangle. Where conflicts and disasters are long-term, embedded processes, the relationship is even more complex and intertwined, and isolating dependent and independent factors becomes problematic. In a similar analysis of the relationship between climate change and violent conflict, Olson and Gawronski (2017: 158) conclude that ‘the relationship between climate change and violent conflict depends upon specific contexts and a multitude of complex interactive forces’.

The severity of a disaster may also be a factor in determining its consequences (Drury and Olson, 1998). Nardulli et al. (2015) found that rapid-onset climate-related disasters, such as storms and floods, appear to have a small impact on civil unrest on average, but closer analysis by Nardulli et al. reveals that they have a highly variable effect on violent civil unrest through generating both cooperative and conflictual behaviours. One statistical study found that, as disaster-related deaths increase, the risk of terrorism incidents and fatalities also increases (Berrebi and Ostwald, 2011). By contrast, another statistical study found that disasters with more *survivors*, including the injured, affected and displaced, lead to a higher risk of conflict due to the potential for disaster to exacerbate or create grievances; where there are fewer survivors, there may be fewer people with grievances. The relationship between disasters with more survivors and a higher risk of conflict is stronger in developing countries

and weaker in democratic ones (Bhavnani, 2006). Other research on this theme builds on the theoretical work of Homer-Dixon (1999), which looks at how natural resource scarcity may lead to an increased likelihood of civil conflict due to competition over these resources. Following this train of thought, it is possible that the severity of a disaster’s impact on natural resource availability may increase conflict. One study on civil conflict in India found that shocks to land productivity, such as poor crop yields or a decline in forest cover, in districts with economies dependent on these natural resources increased direct conflict-related deaths – a measure of conflict intensity – by nearly 60% (Gawande et al., 2017).

Other studies investigate the variable impacts of disasters on conflict and political stability relative to the political and social systems in place. Rapid-onset disasters are statistically correlated with the onset of political instability, particularly in transitional states with weak institutions and limited capacity to resolve conflicts peacefully (Omelicheva, 2011); climate-related disasters, such as heatwaves and droughts, are correlated with armed conflict in highly ethnically fractionalised countries (Schleussner et al., 2016). In a study of Haiti after the 2010 earthquake, Marcelin (2011) linked the re-emergence of gangs in the Cité Soleil shanty town with political, social and economic exclusion and the inability of a weak government to address increasing violence in the area. In Chile after the 2010 earthquake, Carlin et al. (2014) found that the disaster eroded a relatively new democracy, and the post-earthquake crisis period led to violent political and social conflicts along with other undesirable effects, but also strengthened social networks.

There is also evidence that some political regimes may become more repressive following disasters. Wood and Wright (2016) find that disasters increase regime repression, particularly in areas most affected by disaster, because disasters can provide an opportunity to express grievances, both around the disaster itself, and more generally. This in turn can prompt a more assertive government response to suppress threats and maintain control. Linked to this, disasters may provide an opportunity for governments to

make unpopular political and economic changes. In her influential book *The shock doctrine*, Klein (2007) advanced the idea that crises related to disasters or conflict open up opportunities for governments to push neoliberal economic policies. Governments – as well as international lenders and investors – take advantage of collective disorientation and treat disasters as ‘exciting market opportunities’ (Klein, 2007: 6). Examples of ‘disaster capitalism’ have been seen in a variety of locations, including Haiti, Indonesia, the Philippines and Sri Lanka (see also Chapter 3), where coastal communities displaced by tsunamis, earthquakes and typhoons are sometimes forced to relinquish their properties and associated livelihoods to tourism or business (for example, to be developed into coastal resorts and industrial fishing zones).

The presence of robust social and physical infrastructure can also play a key mediating role in the relationship between disasters and conflict. One study shows that drought has a direct link with increased violence in Kenya, though this relationship is moderated by certain official (governmental) and unofficial (traditional or customary) rules around natural resource use and access (Linke et al., 2018). Droughts in sub-Saharan Africa are linked to civil conflict in areas without well-developed road infrastructure, and to communal violence in places without access to improved water sources (Detges, 2016). Levels of education may also play a role in determining how conflicts manifest themselves. In a study of climate-related disasters in India, Slettebak (2013) found that disasters marginally increase the risk of riots when literacy levels are high, and political violence when literacy levels are low.

Pre-existing conflict may be another important factor in explaining when and how disasters lead to more conflict (Harris et al., 2013; Omelicheva, 2011). One statistical analysis of 185 countries from 1975 to 2002 showed that earthquakes, particularly high-magnitude events, lead to a higher risk of intrastate conflict, especially when combined with low GDP and some form of pre-existing conflict (Brancati, 2007). In Sri Lanka and Kashmir, militant groups recruited soldiers, including children, from disaster-displaced populations (Rajagopalan, 2006). Recent

research also shows that disasters and higher disaster vulnerability can prolong civil conflicts by reducing the state’s capacity to suppress insurgent groups (Eastin, 2016).

In conclusion, most of the research on attribution does not support the idea that disasters necessarily lead to conflict, and the complexity of interactions between disaster and conflict, as well as a plethora of mediating factors, makes drawing causal links extremely difficult. That said, it may be possible to identify contexts that are more likely to experience a higher risk of conflict, or where conflict may be more intense or last longer, connected to the occurrence of disaster.

## 2.2 Can disasters lead to increased political legitimacy, cooperation or peace?

Other research claims that disasters have ambivalent impacts. One econometric study of floods and storms between 1980 and 2007 showed that these climate-induced disasters did not lead to an increased risk of armed civil conflict, but they did have a significant negative impact on economic growth (Bergholt and Lujala, 2012). Noting that climate-related disasters, such as storms, floods, droughts, extreme temperatures, wildfires and landslides, have become more frequent in recent decades, Slettebak (2012) conducted a global study to see if such disasters led to an increase in the risk of civil war from 1950 to 2012. Using multivariate methods, the study found that disasters, particularly drought, actually decreased the risk of civil war by unifying the population and giving governments an opportunity to display competence. In a study of post-earthquake El Salvador, some political leaders emerged from disaster stronger, due to public perceptions of traits such as capability, competence and compassion (Olson and Gawronski, 2010). In other instances, disasters can serve as ‘coordinating devices’ for anti-government protests by creating concentrations of displaced people and enabling organisation and coordination, which can in turn threaten a political leader’s hold on power (Flores and Smith, 2013: 843).

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While people may turn to their governments for support when the impacts of disaster events exceed their individual coping capacity, there may be a mismatch between what disaster-affected people expect and what a government is prepared, willing and able to provide (Schneider, 1992). Schneider and Hwang (2014) explain how the response of the Chinese Communist Party (CCP) to the Sichuan/Wenchuan earthquake in 2008 has been portrayed positively in official propaganda as well as the mass media as a way to support the party's political legitimacy. At the same time, the earthquake weakened local authorities' ability to manage the emergency response and created space for local NGOs, networks and volunteers (Shieh and Deng, 2011).

Perceptions and representations of government support following disaster events may have just as strong an effect on political outcomes as any objective assessment. One study of survivor narratives following the 2014 floods in Jammu and Kashmir (Venugopal and Yasir, 2017) suggests that survivors' perceptions of disaster relief may correspond with previously held political beliefs; many people felt that relief and media attention was biased, distorted or exploitative. The same study found that the floods may have constituted a tipping point, albeit one with potentially limited influence, for regime change. The authors suggest that public anger over the inadequate state response to the floods led to local demonstrations, and the Chief Minister and his ruling party lost elections three months later. The study also describes expectations in the Indian media that the army's relief efforts would improve relations with Kashmir and generate a 'social debt' (i.e. gratitude for and acceptance or embrace of Indian rule). Awareness of this political intent may have been one reason why Kashmiris identified local Kashmiri youth volunteers as the primary relief providers and directed their gratitude towards them.

Under certain circumstances, disasters can contribute to enhanced cooperation or peace in conflict-affected places. The subset of literature that investigates this can be referred to as 'disaster diplomacy' (see Kelman, 2012; Kelman and Gaillard, 2007; Kelman and Koukis, 2000; Keridis, 2006; Maciver, 2012).

Disaster diplomacy as a sub-field can be traced to an essay by Kelman and Koukis (2000) suggesting that disaster-related (pre- and post-) activities could catalyse an existing cooperative or diplomatic process, but were unlikely to create an entirely new one. Initially, disaster diplomacy focused most attention at the international level, and referred to formal and public interstate diplomatic interactions after a major natural disaster, and how these interactions can ameliorate international conflict or tension (Kelman and Koukis, 2000). The Greek–Turkish rapprochement following the earthquakes in 1999 is an iconic case study, and one of the first where disaster diplomacy ideas were fully explored (Ker-Lindsay, 2000; Ganapati et al., 2010). Subsequent studies include India and Pakistan following the 2005 earthquake (Akcinaroglu et al., 2011; Kelman, 2006) and Eritrea and Ethiopia following the 1999–2002 droughts (Kelman, 2006).

Even these early studies of disaster diplomacy pointed out that it is problematic to assume a causal relationship between a disaster and a warming of diplomatic relations, better cooperation between states or parties or progress towards peace. Disasters are more likely to have a 'multiplying effect' (Ker-Lindsay, 2000) on diplomacy through inspiring empathy (Akcinaroglu et al., 2011) and providing opportunities for confidence-building (Rajagopalan, 2006), but the foundations for peace must already be in place (Rajagopalan, 2006; Kelman et al., 2018). Rajagopalan (2006: 464) found that disasters had divergent impacts on conflict and peace processes in Sri Lanka (following the 2004 Indian Ocean tsunami), the Maldives (again following the tsunami) and Kashmir (after the 2005 earthquake), and may do little to resolve or transform conflict, particularly where 'conflict structures survive the disaster', or where there is little space for cooperation.

A number of studies focus on the comparative cases of Indonesia and Sri Lanka to isolate the factors that influence whether a disaster leads to diplomacy or conflict. The conflicts in both countries were more than 20 years old when the tsunami hit in 2004. In its aftermath, Indonesia moved into peace talks that led to a peace agreement, while Sri Lanka's conflict

intensified. There is a great deal of literature analysing why the tsunami appears to have had such contradictory effects. Beardsley and McQuinn (2009), for example, point to fundamental differences in the incentive structures of the rebel groups in each country. Others highlight the absence of humanitarian aid in Sri Lanka (Klitzsch, 2014), the politics of the response, competition between agencies and governments over aid resources and a lack of consultation with the public (Schell-Faucon, 2005). Concerning Indonesia, disaster diplomacy is seen as having removed Aceh from the global isolation imposed by the Indonesian government during the conflict (Kelman and Gaillard, 2007; Gaillard et al., 2008). Regarding Sri Lanka, studies tend to focus on increased ethnic and social tensions during the reconstruction process (Uyangoda, 2005). Klitzsch (2014) argues that it was the external peacebuilding support given to Indonesia, compared to the limited support received by Sri Lanka, based on their relative peace prospects, that led to different outcomes.

As the field of disaster diplomacy has matured, conceptualisations have broadened beyond formal public diplomatic interactions to encompass a broader range of disaster-related activities, before and after disasters occur. In intrastate conflicts, for example, disasters can inspire empathy through the shared experiences of loss, which in turn can lead to increased cooperation between the conflicting parties (Endfield et al., 2004). Disasters may also elicit different behaviour from different armed groups operating within the same conflict context, as in the Philippines, where Typhoon Bopha increased violence in the New People's Army (NPA) region but not in areas where the Moro Islamic Liberation Front (MILF) was active (Walch, 2014). Akcinaroglu et al. (2011) suggest that the public plays a more instrumental role than elite figures in determining whether a disaster will lead to progress towards peace, and that the public must see the other side of the rivalry in a positive light and desire a positive change in the relationship. Several studies suggest that disasters can reduce the intensity of civil wars by creating resource scarcities for armed groups that limit their ability to recruit (Saleyan and Hendrix, 2014; Walch, 2018). Other studies look

at contexts with relatively little violent conflict. For example, in a study of Quebec, institutional altruism increased and crime rates fell following ice storms in 1998 (Lemieux, 2014).

Taken together, the disaster diplomacy literature understands that disasters and related activities do not create or resolve conflicts, especially over the long term, and that the foundations for peace must already be present for disaster diplomacy to have any significant short-term impact (Kelman et al., 2018). In the Greece–Turkey case cited above, disaster-related activities after the 1999 earthquakes had no long-term disaster diplomacy effect, nor did the situation create entirely new diplomatic entry points (Koukis et al., 2016). Likewise, Ker-Lindsay (2000: 229) notes that disaster diplomacy played a role in ‘the development, and not the initiation, of ties between the two governments’. This is reflected in Indonesia, where Gaillard et al. (2008) find that, while the tsunami catalysed diplomatic talks, negotiations for peace were already under way, and non-tsunami factors were likely more important for both short- and long-term peace.

## 2.3 The impact of conflict on disaster

The literature on the interface between disasters and conflict shows that disasters and activities preceding and following them have varied impacts on peace and conflict in a variety of geographies, across different scales and within different types and intensities of conflict. While this chapter has focused on the literature investigating the impacts of disaster on conflict, there are notable examples of quantitative studies examining the impacts of conflict on disaster.

In their foundational work, Wisner et al. (2004) describe conflict as a root cause of vulnerability, as well as a dynamic pressure on natural hazards. Marktanner et al. (2015) build on the idea of ‘war as a dynamic pressure’ by investigating how armed conflict exacerbates the negative impacts of disaster. In their global quantitative study, the authors find that disaster deaths are 40% higher in places with a history of armed conflict than in places without. The authors point out multiple possible mechanisms by which conflict increases disaster impacts, including

forced migration to hazard-prone areas, limited access to humanitarian aid, weakened public disaster risk management (DRM) capacities and individual resilience to natural hazards and the deliberate use of disaster vulnerability as a tool of warfare. Uzoechina (2009) suggests that conflict may increase disaster risk by undermining individual coping capacity, disrupting social support networks, inducing mass displacement and diverting resources away from DRR and development activities.

Many studies in this area focus on protracted or slow-onset disasters, such as drought. Examples include the political roots of drought-induced famine in Africa (see de Waal, 1997); the politics of famine in Ethiopia (Lemma, 1985; Keller, 1992); and the role of post-colonial economic structures and political marginalisation in determining how different groups have experienced famine in Nigeria (Watts, 2013). As Detges (2016: 697) points out in the case of drought-related violence in sub-Saharan Africa, there has been no systematic assessment of whether (and to what extent) the risk of conflict related to drought is reduced or exacerbated by the creation of inequality through differing levels of infrastructure provision. There is also evidence of the wider effects of violence in sub-Saharan Africa, including on health outcomes. A recent study by Østby et al. (2018) found that geographical and temporal proximity to organised violence increases the likelihood that mothers – particularly mothers who are poor and less educated – will give birth outside of health facilities, with obvious consequences for maternal and child health.

## **2.4 Climate-related disasters and conflict: the climate–security nexus**

Interdisciplinary academic research on the relationship between disasters and conflict has burgeoned alongside scholarship on the climate–security nexus, with much overlap between the two. Research on climate security examines the relationship between climate change, including climate-induced natural hazards, and conflict, security and stability. This literature, which features a broad range of disciplines, can focus on place-based evidence

– particularly in the Levant, the Sahel and the Horn of Africa – but can also include statistical analyses at larger scales. For example, Kelley et al. (2015) examine anthropogenic climate change-induced drought as a contributing factor to the Syrian conflict – though this has been disputed (see Selby et al., 2017) – and Raleigh and Kniveton (2012) conclude that extreme rainfall anomalies in either direction (i.e. drought or flooding) were accompanied by increased communal violence in East Africa (1997–2009). One global meta-analysis (Burke et al., 2015) found that deviations from mean temperature and precipitation patterns increase conflict risk. Climate change may also increase the risk of civil conflict through its multiplying effects on other mitigating factors (Bergholt and Lujala, 2012; Koubi et al., 2012). This echoes suggestions in the literature on disasters and conflict that disasters may exacerbate conflict factors already present within a society (e.g. Harris et al., 2013; Omelicheva, 2011). This overlap is perhaps unsurprising given that these studies often use climate-related disasters (rapid- and/or slow-onset) as a proxy for climate change, and so in essence are studying the same or very similar things.

Climate-related disasters, and their knock-on impacts, have been used as evidence of the security impacts of climate change for more than a decade in the international political arena (Peters, 2018a). This stems from the origins of the political debates on climate change and security impacts in the mid-2010s in the UN Security Council, the General Assembly and in individual states. With the exception of Japan – perhaps unsurprisingly as the chaperone of the Hyogo and Sendai Frameworks – few references are made to DRR as a potential solution, or contribution to the suite of solutions, to the security impacts of climate-related disasters.

The literature primarily draws on the notion of the ‘threat multiplier’ effect, a term coined by the CNA Corporation Military Advisory Board (2007) to suggest that climate change could make it more difficult for governments to meet their citizens’ basic needs, thereby exacerbating the challenges to effective governance and undermining stability in already ‘volatile’ regions. The Board also asserted that the impacts of



climate change across the world posed a threat to US national security, including through a potential rise in terrorism, infectious diseases, increased immigration and disruption to trade (see also Trombetta, 2008; Peters, 2018). Interestingly, no concerted links are made between analysis focused on climate-related disasters and security concerns and the security aspects of disaster studies, including the institutional and historical establishment of civil protection and civil defence groups, which in many countries are linked to military and non-military disaster response operations (Peters et al., 2017).

The influential G5-commissioned report *A new climate for peace* (Rüttinger et al., 2015: 34) identified climate-related disasters as one of seven climate fragility risks:

Extreme weather events and disasters will exacerbate fragility challenges and can increase people's vulnerability and grievances, especially in conflict affected situations. The relationship between disasters and fragility is often mutually reinforcing; disasters put additional stress on stretched governance systems, decrease economic opportunities, reduce resources, and displace people.

These links continue to be made, including for example in the World Economic Forum (WEF)'s *Global risks report* (2019), which refers to security risks, migration and displacement as three of the spillover effects of floods and coastal storms.

This is an area of lively debate, with many researchers arguing that the links between climate change and the risks of violent conflict are overstated (see Buhaug, 2010). The Intergovernmental Panel on Climate Change (IPCC)'s Fifth Assessment Report (AR5, 2014), for example, refuted the claim that climate change will lead to increased conflict between states and pointed out that 'confident' claims about this relationship are not possible. However, the report also commented that 'there is justifiable common concern that climate change or changes in climate variability increase the risk of armed conflict in certain circumstances' (Adger et al., 2014: 773). Unlike AR5, the next

IPCC report (AR6), scheduled for release in 2021–2022, does not plan to include a chapter on the human security dimensions of climate change, and references to security and conflict are expected to be very limited.

Using disasters as evidence of the security impacts of climate change has also been criticised on moral grounds as unduly casting people vulnerable to climate-related hazards as a security 'threat' (Peters, 2018b, drawing on Hartmann, 2014). It also raises questions regarding the introduction of new actors – such as the military – and instruments – including emergency and preventative measures – into efforts to address climate change and environmental issues (Trombetta, 2008).

Until more conclusive scientific evidence is gathered to establish the direct and indirect causal mechanisms that link climate, disasters and security, academic and policy debates are likely to remain contentious. Sakaguchi et al. (2017) specify that a conclusive systematic review of the literature that establishes the links between climate change and conflict is in part limited by the varied methodologies employed. Meierding (2013) suggests that investigations of the climate–conflict relationship must mature and refine their theoretical arguments to meaningfully advance this body of knowledge. Another challenge concerns the mismatch in spatial and temporal scales between global climate change and policy-making; Moran (2011) points out that, while global climate models tend to produce helpful conclusions at 50- or 100-year time scales, even 20 years represents a long-term horizon for human decision-making and policy.

While some are doubling down on fine-tuning quantitative models and methodological approaches, Vivekananda et al. (2014) point out that establishing causality between climate change and conflict is of little use either to governments or to actors involved in peacebuilding work. Instead, they argue that more emphasis should be placed on understanding, enabling and promoting 'pathways between climatic changes and peace in fragile and conflict-affected societies' (Vivekananda et al., 2014: 488). They also suggest that, while there may be a connection between climate change, vulnerability and

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conflict, there may also be a virtuous cycle between climate change, resilience and peace. This can be achieved through ‘peace-positive’ climate change adaptation efforts and ‘climate-proof’ peacebuilding and development. Within the disaster risk reduction community, Stein and Walch (2017) have offered related arguments on how the Sendai Framework for Disaster Risk Reduction can be used for conflict prevention and sustaining peace. (For more on the practicalities of conducting DRR work in conflict-affected settings, as well as developments in the alignment of

climate change adaptation and peacebuilding, see Chapter 4.) Others suggest that research should probe more deeply into causal pathways; Sakaguchi et al. (2017: 624), for example, argue that ‘a more disaggregated understanding of the causal pathway is necessary to inform interventions that may reduce the incidence of violent conflict’. Research on vulnerabilities and the social contract lends itself more to actionable inroads for interventions and provides more insights into breaking disaster–conflict pathways and bolstering disaster–peace pathways.



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# 3 Vulnerabilities and the social contract

DRR continues to be viewed as the state's responsibility, and most DRR approaches are state-centric, following the Sendai Framework's assertion that the primary responsibility for preventing and reducing the risks of disaster lies with the state (UNISDR, 2015; see also Peters, 2017; Stein and Walch, 2017; Siddiqi, 2018). Ideally, this responsibility would extend to strategies such as providing DRR goods and services (e.g. early warning systems, hazard-proof shelters, environmental buffers); engaging in actions that reduce risk (i.e. building infrastructure in a way that minimises exposure and vulnerability to environmental hazards); regulating private sector activity; promoting collective action; and coordinating multi-stakeholder activities (Wilkinson, 2012).

In conflict-affected contexts, states must prioritise immediate needs (humanitarian aid and/or the provision of basic services), and responsibilities for promoting DRR are often neglected. Many scholars have pointed this out; King and Mutter (2014), for example, acknowledge the role of conflict in hindering relief efforts and diverting resources otherwise available for disaster mitigation; Twigg (2015) notes that DRR is likely to be overlooked in favour of more pressing needs; and Peters (2017) finds that longer-term risk reduction activities tend to take second place to protection, peacebuilding and stabilisation in active conflict areas.

Conflict-affected states may also not be able or willing to protect all their citizens equally. As such, the social contract between the state and

its citizens in terms of keeping citizens safe from disasters, the social vulnerabilities of the affected population and the power dynamics and systemic risks prevalent within communities and societies are all crucial aspects to consider for DRR in conflict-affected contexts.

## 3.1 DRR and the social contract

Since the early 2000s, questions have been asked around who is responsible for disaster preparedness when there is no functioning state (Christoplos et al., 2001; Buchanan-Smith and Christoplos, 2004). These questions are tied closely to Jean-Jacques Rousseau's social contract theory, which posits that individuals consent to the authority of a state in exchange for the state's protection of their rights (Rousseau, 1762). This has been further established in international law.<sup>3</sup> In the case of disasters, states have an obligation, according to the social contract and under international law, to protect and assist their citizens by preventing and mitigating risks prior to a disaster, and in subsequent response and reconstruction efforts. In fragile states, however, the social contract binding the citizen and state has broken down, is limited or has been undermined by a lack of state capacity or will, with cascading consequences for DRR (Manyena and Gordon, 2015; Peters, 2017).

The language of the social contract can be used 'to highlight inequalities resulting from specific development failures which underlie unequal geographies of disaster risk reduction' (Blackburn and Pelling, 2018: 2; see also Mitra et al., 2017).

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3 Other literature that has looked at the disaster–conflict nexus and the social contract focuses on disasters as an opportunity for citizens and states to rethink and renegotiate their social contract. See, for example, Pelling and Dill (2010) and Siddiqi and Canuday (2018).

Hilhorst and Bankoff (2004) similarly argue that the degree to which people are prone to disasters is dictated by social processes that generate unequal exposure to risk, and by inequalities inherent in the power relations of a society. These inequalities – both vertical, hierarchical inequalities, and horizontal, group-based inequalities – are exacerbated by disaster and conflict, and the fulfilment of the social contract in preventing and responding to disasters may not satisfy all groups or regions equally, even in stable and more equitable societies where the social contract appears to be intact.

Harvey (2009) proposes a typology for state roles in disaster response, sorting them into three categories based on the social contract and their capacity and ability to respond to disasters: (1) states with an existing or emerging social contract, where the state assists and protects its citizens in disasters; (2) weak states with limited capacity and resources and that cannot meet their responsibilities to assist and protect citizens in disasters; and (3) states that do not want to negotiate a social contract and will not assist or protect citizens in disasters. Fragile and conflict-affected states typically fall into the second and third categories, where the international aid community is required to step in and either help build capacity or advocate for states to fulfil their obligations. A similar typology could be created for DRR, where fragile states may not have the capacity or resources and conflict-affected states may not have the desire to engage in DRR – or ‘fragile and conflict-affected states that are *willing but unable*, and those that are *unwilling and unable* to reduce the vulnerability of populations to disaster risks and impacts’ (Harris et al., 2013: 17; see also Pelling and Dill, 2010; Peters, 2017). A third category could be proposed for states that are *able* to reduce vulnerability, but are *unwilling* to do so through purposeful neglect of certain areas or populations.

Few longitudinal or systematic studies of DRR in conflict-affected countries exist to test this typology. In Nepal, a fragile state with limited government capacity in some areas and in the early stages of democratic development, the gap between what the government should cover but cannot is currently being filled by non-governmental stakeholders, including national

and international NGOs funded by foreign aid. NGOs emerged in Nepal as early as the 1950s and have since proliferated: ‘39,759 NGOs and 189 international non-governmental organizations were registered in Nepal between 1977 and 2014 in various sectors, including health, agriculture, poverty alleviation, and good governance’ (Karkee and Comfort, 2014). The ubiquity of NGOs has generated tensions as the government believes that international aid should be channelled directly to the state to help build capacity, rather than directed to NGOs (Jones et al., 2014). For the most part, DRR ‘tends to assume a positive state–society “social contract” exists where the state adopts the management of risk as a public good’ (Harris et al., 2013: 17). In conflict-affected contexts where there is no effective social contract, new approaches to DRR will need to be developed and tested (see Chapter 4).

While there is some research on NGOs assuming roles that a government is unable and/or unwilling to fulfil, particularly around international aid and civil society organisations in Afghanistan and Nepal (see Goodhand, 2002; Heijmans, 2012; Jones et al., 2014) and NGOs providing climate services (Jones, 2016), the implications of this are still unclear. Unlike governments, NGOs are ‘unelected and unaccountable’, and thus unlikely to overcome ‘the limitations of the system that made them necessary in the first place’ (Lehman, 2007: 645, 664). In Lehman’s view, any NGOs that intervene to provide DRR services in countries where governments are unwilling or unable to do so are likely to be perpetuating this system, rather than covering a transitional period until the government eventually takes on these responsibilities. After the earthquake in Haiti in 2010, key state functions were outsourced to NGOs, resulting in a proliferation of non-state actors and short-term projects that reconfigured power dynamics in unpredictable ways (Marcelin, 2011; 2015). One study on hybrid governance (shared governance between the government and local institutions and NGOs) in Africa suggests that the involvement of international actors in such governance arrangements excuses the government from its accountability obligations towards its people, countering the assumption that these

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arrangements can positively impact the process of state formation (Meagher et al., 2014). For example, when other organisations take on roles that are normally provided by the state, this may result in less public pressure on the state to fulfil those obligations.

## 3.2 Disaster risk governance and conflict

Disasters are inherently political: although initiated by a natural hazard (the shock or threat), the impact of this shock (the disaster) is tied to the social and political system in which it occurs (Wisner et al., 2004; Cohen and Werker, 2008; Fisher, 2010). Different types of actors ‘see’ and approach disasters differently, based on their perceptions of disaster risk and their notions of prevailing social order and social relations (Bankoff and Hilhorst, 2009). Wisner et al. (2004: 7) define disaster risk as ‘a combination of factors that determine the potential for people to be exposed to particular types of natural hazard’, which ‘depends fundamentally on how social systems and their associated power relations impact on different social groups’. Only by recognising the genuine problems and priorities of disaster-affected people – problems and priorities that can change before, during and after disasters – can their vulnerability be reduced (Ahrens and Rudolph, 2006; Birkmann, 2008).

Social contract theory can also help in evaluating the adequacy of disaster risk governance by identifying the responsibilities governments have towards their citizens, and whether or not these are being fulfilled (Christoplos et al., 2017; Blackburn and Pelling, 2018). The Sendai Framework highlights the importance of disaster risk governance, and places the responsibility for it firmly on the state (UNISDR, 2015; see also Stein and Walch, 2017). Ahrens and Rudolph (2006) analyse the key features of risk governance to support DRR as accountability, participation, predictability and transparency – all of which also feature in functional social contracts. Walch (2018) has suggested three ways that disaster risk governance could be altered in conflict-affected contexts: if rebel groups control territory and are on good terms with the local population,

then existing institutions can positively affect DRR; if armed actors do not control territory, then robust and legitimate informal institutions could provide a stabilising influence and, thus, positively affect DRR; if territorial control is unclear and informal institutions are weak or non-existent, then DRR is unlikely to affect the situation positively since there are no institutions or leaders willing to protect civilians. Analysing these relationships could build on work on negotiations with non-state armed actors for humanitarian access (Glaser, 2005; Svoboda et al., 2018). Along with the amount of territory they control, Zahar (2000) notes that the type of militia involved – its identification with different social, religious or political groups, where it get its revenue, its objectives and structure – is important when it comes to deciding whether to undertake these negotiations.

Lassa et al. (2018) have proposed the construction of an index to assess governments’ commitment to reducing disaster risk using five quantitatively measured variables: risk knowledge, disaster governability, DRR investment, bureaucratic preparedness and early warning systems. Some disaster-prone countries ‘have higher bureaucratic preparedness than overall disaster risk governability’, which suggests that the presence of public administration for disaster preparedness on paper does not equate to good disaster governance in practice, and, moreover, without governability – as is the case in conflict-affected countries – ‘disaster risks will neither be managed or reduced’ (Lassa et al., 2018: 7).

As a comparative review by UNDP (2011: 8) found from case studies in Bolivia, Haiti, Indonesia, Kenya, Kyrgyzstan, Papua New Guinea, Sri Lanka, Sudan and Zimbabwe, violent conflict and political tension can hinder DRR and recovery across all scales, ‘divert[ing] political attention away from the importance of disaster issues’. Numerous studies explore the governance landscape in which disasters occur, to show how conflict dynamics shape practices, progress and outcomes: Field and Kelman (2018) explore the India, China, Pakistan border regions; Jones et al. (2016) contrast Nepal with Bihar, India; and Artur (2018) takes a historical perspective in Mozambique. Such studies explore

the institutional, political, socioeconomic and cultural disaster risk governance landscape in which DRR takes place, often with a focus on the interaction and power dynamics between stakeholders at different stages in the DRM cycle. In this work, DRR is taken as a political arena where different stakeholders negotiate, debate and defend their risk priorities, and where decisions are made about whose risk is prioritised, and which risk reduction measures will be implemented and where.

Exploring the relationship between disaster risk governance in conflict and post-conflict environments helps provide insight into the historical, institutional and political context in which DRR operates. For example, Jones et al. (2016) found that Nepal's history of conflict contributed to the weak legislative and institutional framework around earthquake risk reduction in the country. In contrast, Bihar has strong, and arguably more sustainable, institutional structures from which to establish and advance longer-term DRR. In Zimbabwe, Manyena (2006) found that an unstable political system is hindering the roll-out of a fully decentralised fiscal and administrative system, in turn undermining the ability of rural councils to facilitate DRR. Similarly, with examples from Colombia, Indonesia, Mozambique and South Africa, Williams (2011: 5) finds that 'political competition and the quality of a country's institutions play a key role in determining the effectiveness of disaster risk reduction'. Taking the intersection of conflict, disaster response and environmental hazards along the Indian border as an example, Field and Kelman (2018) show how, in Ladakh, disaster risk governance has been shaped by national security concerns, with hazard-centred, military-led responses prioritised above longer-term, participatory or capacity-focused DRR processes.

Other literature explores the influence of geopolitics and political positions on the likelihood of a regime accepting or rejecting post-disaster aid. Understanding 'aid refusal as a political act', Nelson (2010a: 379) finds through quantitative analysis that poorer developing countries are less likely to refuse aid. That said, autocratic regimes are neither more or less likely to refuse aid than democratic

regimes, though transition states are likely to 'publicly and explicitly refuse aid and insist on their own ability to handle disaster relief and recovery'. One example is the case of Cyclone Nargis in Myanmar, where the government was reluctant to accept international aid. Creac'h and Fan (2008) explore the important brokering role that regional bodies can play, in this case the Association of Southeast Asian Nations (ASEAN). With DRR often funded as a proportion of humanitarian response, the politics of aid refusal also have implications on DRR progress – though this is not extensively explored in the literature.

### 3.3 Political and personal power in disasters

The inadequacy of disaster governance in conflict-affected contexts has led many scholars, practitioners and the UN to advocate via the Sendai Framework for a rights-based approach to both DRR and disaster response that recognises and responds to inequality and marginalisation (UNISDR, 2015; Ensor et al., 2018). Incorporating a human rights perspective affirms the rights of vulnerable people, including those displaced by disaster, promotes disaster-resilient communities and works to prevent conflict (Ferris, 2010; Mitchell and Smith, 2011). As da Costa and Pospiesznac (2014: 3) argue, 'Regardless of various ambitious policies on natural disasters ... if such basic issues like the human rights protection and empowerment of local community is missed, this impedes the efficiency and effectiveness of efforts to reduce or manage disaster risk'.

In conflict-affected countries, the risk reduction options available to individuals may be limited, and state governments that are mistrusted by their own citizens may find it hard to put policies into practice (Wisner et al., 2004; Eiser et al., 2012; Stein and Walch, 2017). In 1991, public reluctance to heed government warnings ahead of a cyclone in Bangladesh reflected, in part, the lack of credibility of government announcements (Keefer, 2009). Access to information about natural hazards and how to prepare for them is typically distributed unevenly throughout a community, and may not

reach the most marginalised groups (Eiser et al., 2012). During the same 1991 cyclone, 90% of those who died were women, as men received warning information in public spaces while women, many of whom would not leave the house without a male relative, waited for their husbands to return home and help them evacuate (Metha, 2007; Brody et al., 2008; IFRC, 2016). More recently, communities in Afghanistan have invested in disaster preparedness and mitigation measures for floods, avalanches and drought, with the support of Afghan NGOs since the government does not provide these services (Heijmans, 2012). By adopting a governance perspective, more attention is paid to how power is distributed by the state as well as other actors, such as civil society organisations, NGOs and fellow citizens (Jones et al., 2014).

Issues of power are manifest not only between the state and its citizens, but also between individuals. This is particularly apparent in gender-based violence (GBV), which often increases in disasters (Brody et al., 2008; UNDP, 2011; IFRC, 2016). Fisher (2010), looking at GBV during the 2004 tsunami in Sri Lanka, notes that this must be understood in the context of pre-existing gender-based violence. In Sri Lanka, levels of violence against women were already high due to conflict and displacement, but increased following the tsunami due to insecurity and the general chaos of the initial emergency phase. Other studies have found similar results following Hurricane Mitch in Nicaragua and Honduras in 1998 (Delaney and Shrader, 2000), the 2005 earthquake in Kashmir (Oxfam, 2005; Metha, 2007) and numerous cyclones and tsunamis in Bangladesh, Myanmar and Samoa (IFRC, 2016).

### **3.4 Reproducing systemic risk in reconstruction and resilience**

Marginalisation and GBV are just two of the many systemic risks in conflict-affected contexts that can be aggravated by disasters, and reproduced in post-disaster recovery, including in ‘build back better’ processes. The intersectionality of gender, ethnic or religious marginalisation and/or poverty can create long-term vulnerabilities. These vulnerabilities can

be exacerbated by environmental degradation, political corruption and discrimination, and are likely to lead to forced displacement and denial of access to resources (Ferris, 2010; Lewis, 2014). Even in developed countries that are not experiencing armed conflict, marginalisation based on race, ethnicity or religion can lead to increased vulnerabilities and reduced access to services, as was the case following Hurricane Katrina in the United States in 2005 (see, among others, Hartman and Squires, 2006; Klein, 2007; Levitt and Whitaker, 2009; Eyerman, 2015).

There is substantial evaluative literature on individual disaster response, recovery and reconstruction operations (examples of specific relevance to conflict contexts include Artur (2013) on response; the Global Facility for Disaster Reduction and Recovery (GFDRR) (2016) on recovery; and Kennedy et al. (2008) on reconstruction). Complementary work, such as Fan et al. (2015)’s review of evidence on the intersection of disasters, conflict and fragility, identifies several entry points, including linking post-conflict recovery with DRM and integrating DRM into priority sectors in fragile states.

The aftermath of the 2004 Indian Ocean tsunami gave rise to the tagline ‘build back better’ as a new way of incorporating DRR into reconstruction efforts. Addressing the root causes of vulnerability was included in several of the propositions that defined ‘build back better’, as articulated by Bill Clinton, the former US president and UN Special Envoy for Tsunami Recovery. In particular, proposition 10 stated that ‘good recovery must leave communities safer by reducing risks and building resilience’ (Clinton, 2006; Kennedy et al., 2008: 26). While there is an intuitive sense to approaching recovery in a way that also enhances people’s ability to withstand future shocks, several studies explore how boosting resilience may inadvertently reinforce exploitation (Leach, 2008). In Sri Lanka and Aceh, Indonesia, for example, the focus on reducing tsunami vulnerability by creating buffer zones for coastal redevelopment increased vulnerability for people whose livelihoods depended on the sea (Kennedy et al., 2008). In Sri Lanka, land appropriated in this way is now being used for commercial purposes, such as tourism and

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agriculture (Human Rights Watch, 2018; see also Chapter 2).

Kennedy et al. (2008)'s work on shelter reconstruction in post-tsunami Aceh and Sri Lanka asks whether the theory and practice of 'build back better' came to fruition in settlement and shelter programmes. Alongside recommendations such as ensuring community involvement but not necessarily control, the value of cross-sectoral planning, and integrating relief and development through long-term planning and DRR, the authors find the notion of 'better' (in 'build back better') to be imbued with meaning and multiple interpretations, and argue that it may be better to adapt the tagline to 'build back safer', which has clearer goals for post-disaster settlement and shelter outcomes. 'Safer' encompasses specific criteria, such as safer and environmentally friendly construction and spatial planning. Although not explicitly discussed by Kennedy et al. (2008), ensuring greater clarity on the intended outcomes of risk management interventions could be a useful starting point for agencies engaging in DRR in conflict-affected contexts. Addressing disaster risk and incorporating DRR into rebuilding processes is not just a technocratic exercise, but requires engaging with issues of power, politics, marginalisation and vulnerabilities (Peters, 2018).

Disaster recovery in a conflict context is extremely challenging. Lessons from GFDRR (2016) reveal how conflict contexts affect the design and implementation of recovery efforts. Notable challenges include resource allocation, which can become 'highly politicised and exacerbate pre-existing social tensions between groups, leading to criticism of legitimacy and undermine recovery efforts' (GFDRR, 2016). Experience of these challenges has led to a revisiting of the GFDRR Disaster Recovery Framework Guide, and emphasis that disaster recovery in conflict contexts requires special attention to principles of social inclusion, impartiality, empowerment, gender and 'do no harm'.

Because disasters are political – and disasters in conflict-affected states even more so – DRR efforts in these contexts must factor in issues of state legitimacy, human rights and vulnerability created by displacement, poverty and violence. To do this, it must focus on conflict sensitivity (Conflict Sensitivity Consortium, 2015) and Do No Harm (Anderson, 1999) approaches that take interacting vulnerabilities into account (Peters and Budimir, 2016). Arguably, new ways of working will be needed to pursue DRR when national governments are not viable entry points, and when political interests interfere with the effective functioning and equitable distribution of support to disaster-affected people (Peters, 2017).



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# 4 Pursuing DRR in conflict contexts: challenges and opportunities

It has long been argued that it is time to advance DRR in complex political contexts by moving away from discrete risk management actions confined to humanitarian assistance or development, and instead taking a holistic approach to addressing the challenges and exploiting the opportunities DRR in conflict contexts presents. Writing almost 20 years ago, Christoplos et al. (2001: 185) found that, despite the ‘glaring need to reduce the horrific impact of floods, droughts and wars, disaster mitigation and preparedness have neither the allure of directly “saving lives”, nor of providing an “escape from poverty”’. Then as now, complex political emergencies constitute the ‘new normal’ in many contexts, raising important questions about normative conceptions of and approaches to DRR, including the centrality of the state, the position of national DRR policies and institutions as the primary entry point for effective risk governance (Peters, 2017) and the assumption that stability and peace are prerequisites for undertaking DRR. In order to work in insecure contexts, DRR practitioners must adapt ‘normal’ programming and ways of working, adjusting to different scales or using different entry points for access.

Barriers to advancing action on DRR in conflict-affected contexts – real and perceived – include prioritisation of peace and security over DRR and questions over the capacity of DRR actors to work in conflict-affected contexts: willingness and skill set, the politics of combining

approaches to DRR and peace and managing expectations (particularly among donors) of what can be achieved. Conflict can obstruct efforts to map hazards and vulnerabilities, information on disaster risk can be manipulated or politicised and insecurity can restrict staff movement (Harris et al., 2013: 20–22). Some types of DRR interventions may simply not be feasible, or there may be a tacit assumption that individual projects or agencies working in isolation will not be sufficient to address disaster risk, and will have only limited lasting impacts.

This chapter challenges these assumptions by presenting examples of progress on DRR in conflict-affected contexts. While the documented evidence is not substantial, nascent examples do exist where constraints have been overcome or innovations trialled. Concern Worldwide, for example, has partnered with peace and reconciliation specialists through joint programming on DRR and conflict resolution in Haiti, has applied conflict-sensitive approaches to drought and flood mitigation in Somalia and has established and operationalised early warning systems to manage food insecurity in Chad (Peters, 2017). This is not to argue that DRR in conflict is straightforward or without risk – the chapter discusses considerations around Do No Harm, conflict sensitivity, human rights and peacebuilding, among other sensitive issues that working on DRR in conflict inevitably raises – but it does suggest that action on disaster risk in conflict is both possible and necessary.

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## 4.1 Examples of DRR in conflict-affected contexts

Specific examples of DRR in conflict-affected contexts can be loosely grouped into two areas. The first, building on work on famine in the 1980s, focuses on slow-onset disasters and humanitarian crises, which more recently have become part of a broader agenda including prevention, early action and efforts to reduce the humanitarian caseload. The second, smaller group comprises grey literature, primarily from NGOs, documenting projects at the local scale. These often include a combination of DRR, food security and livelihoods sustainability, framed as resilience-building. Other examples use specific sectors as an entry point for action on disaster and conflict risk. Overall, however, while toolkits and handbooks have been adapted, there is still little in the way of practical DRR guidance which is sufficiently nuanced to articulate different entry points, approaches and means of monitoring DRR for different conditions of conflict (Peters, 2018). While foundational work such as Twigg's (2007) *Characteristics of a disaster-resilient community* have proved useful guidance, and organisations such as the Red Cross have given greater consideration to protection issues, especially violence, in post-disaster situations, DRR approaches have generally not been adapted to the different and dynamic conditions of conflict.

Since the late 1980s, DRR at the local level has evolved substantially. A large body of work has been developed, including toolkits and handbooks on community-based DRR. Practical examples include the Palestine Red Crescent Society's use of participatory methods to identify the disaster preparedness needs of local communities, and to solicit community perspectives on ways to mitigate disaster impacts. This emphasis on understanding local needs and capacities is reinforced by Heijmans et al. (2009), who underscore the importance of better understanding what affected people do, their survival strategies and the kinds of assistance they need. Grassroots perspectives from Afghanistan, Burundi, Nigeria, the Philippines and Sudan show how local early warning systems not only inform people of potential danger or

disaster, but can also encourage action on the part of those responsible for maintaining law and order, safety and protection.

Other practical examples include efforts to link responses to drought with conflict prevention, poverty reduction and insecurity. The Somalia Resilience Programme (SomRep) (2014) uses a community empowerment approach to support local disaster risk management committees, acting as an early warning mechanism for a range of risks including floods and conflict, as well as slow-onset drought and the impacts of climate change. While further work is required to link local to national early warning systems, preliminary results point to the value of these structures in enabling local monitoring and response to risk trends. In another example from Somalia, efforts to avoid a repeat of the 2011 famine prompted increased attention to and investment in linking early warning and response using an 'early-action trigger mechanism' comprising a dashboard and accountability framework during the 2016–17 pre-drought crisis (Feeny, 2017).

A number of project-specific reports provide insights into practical examples and lessons from DRR in conflict contexts. Molenaar (2011; see also Cordaid and IIRR, 2011) documents lessons from Cordaid's community-managed DRR programmes in Uganda and Sudan, exploring whether and how a community-based approach to DRR could help reduce violent conflict and natural hazard risk. Although a project-specific report, the findings point to the need to more critically assess concepts of community homogeneity, victim status and existing capacities at the community level, and the importance of learning from other practitioners. With regard to the latter, the report specifically points to the fact that: 'Conflict Transformation people have ideas about CMDRR [community managed disaster risk reduction] and the other way around, but these ideas are more based on thoughts than on facts. Thus, more knowledge should be exchanged between the different sectors with those who are interested' (Molenaar, 2011: 27). The report also notes the organisational barriers and prejudices preventing DRR and conflict transformation staff from working more closely together.



There has been criticism of community-based approaches to DRR, and specifically the discourse promoting it as ‘empowering’ and (relatively) apolitical. Heijmans (2013), for example, argues that most community-based interventions purposely avoid challenging prevailing power relations, and downplay the importance of negotiation between the various stakeholders involved. Through a case study of the ‘everyday politics’ around flooding on the Juwana River in Indonesia, Heijmans shows how the government’s proposed DRR activities, including building evacuation centres, bear little relation to communities’ priorities, and how, over time, local actors and organisations can become more politically engaged, in this case calling for greater engagement in decision-making processes and promoting the voice and rights of local communities. Similarly, Cannon (2014) cautions against romanticising the ‘local’ by demonstrating how exploitative power dynamics operate at the local level too. Similar arguments to de-romanticise the ‘local’ have been made in relation to peacebuilding and state-building processes (Richmond, 2011).

Finally, there has been little work that has demonstrated an ability to scale up community-based DRR (CBDRR) to sub-national or national level, or to capitalise on individual project-based approaches to develop a DRR movement at large – except arguably through the auxiliary role of the Red Cross national societies. Finding ways to make this transition is necessary to avoid reproducing parallel non-state systems, which may begin as backstopping a lack of state service provision but may inadvertently end up circumventing the state.

## 4.2 Do No Harm and conflict sensitivity

A number of papers explicitly or implicitly point to the disconnect between hazard-focused approaches to DRR and the political reality in which decisions about whether, and how best, to advance disaster risk governance are taken. Using the cases of post-tsunami Aceh, Levine et al. (2014) argue that a techno-centric approach to resilience without sophisticated political analysis may result in interventions that do more harm than good.

A subset of grey literature from NGOs documents examples, cases and efforts to apply principles of Do No Harm (Anderson, 1999) and conflict sensitivity (Conflict Sensitivity Consortium, 2015) to DRR interventions. Do No Harm is a practitioner-oriented methodology and principle which essentially recognises that aid is a transfer of resources, and as such is not neutral and can affect (positively and negatively) conflict dynamics. Conflict sensitivity takes this one step further in order to actively understand the interaction between an intervention and the context ‘and to act upon the understanding of this interaction, in order to avoid negative impacts and maximise positive impacts’ (APFO et al., 2004: 3). The focus is primarily on local-scale, individual projects, often set in the context of post-disaster response, though occasionally as part of a broader programmatic effort to tailor interventions to conflict contexts.

Several papers explore the value of applying conflict-sensitive measures to post-disaster recovery and relief operations. Arai (2012) uses the post-2010 flooding in Pakistan to demonstrate how, in order to be conflict-sensitive, humanitarian relief and development practitioners need to design interventions based on a systematic analysis of conflict dynamics within a context; link conflict analysis to the programme cycle of their intervention; and continuously monitor, evaluate and adjust activities based on feedback received. Arai suggests that relief activities should focus on the most vulnerable populations and establish local–international partnerships that proactively prevent aid distribution from being used to advance political agendas in the emergency phase. Efforts should then mature in the reconstruction phase to establish and involve locally owned cooperatives, introduce cash-for-work and provide vocational training to support alternative livelihoods.

Another example concerns participatory approaches to learning by World Vision Honduras, where practitioners have combined DRR with peacebuilding and climate change adaptation to promote more holistic vulnerability and capacity assessments (Ibrahim and Midgley, 2013). This, it is hoped, will lead to better programme design, implementation

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and monitoring. Garred (2006) explores how World Vision's use of Do No Harm and conflict sensitivity since 1997 has matured through application in community development through to emergency management, with examples of the latter including:

- In the 2004 Cambodia drought response, conflict assessments were used to inform beneficiary selection and mitigate local tensions.
- Following the 2004 Indian Ocean tsunami, conflict-sensitivity tools previously used in development programmes were adapted for the emergency response. In Sri Lanka, conflict assessments were conducted in resettlement sites, and issues of equity were raised in relation to beneficiary targeting. In Aceh, conflict assessments were carried out for the preliminary shelter strategy, and macro-analyses were subsequently updated in light of the peace process.

This experience has led agencies including World Vision to call for integration of Do No Harm and conflict sensitivity beyond conventional 'development' programmes, and for emergency response to be included in ex-ante measures including disaster preparedness (Garred, 2006).

The GFDRR *Disaster recovery framework guide* describes the need to adopt principles of conflict sensitivity. A two-way relationship is described: between a (conflict) context affecting recovery efforts – affecting what's feasible; and recovery interventions affecting conflict dynamics – through the allocation of resources. The aim is to ensure that the potential for negative impacts stemming from recovery efforts is reduced, and the positive impacts on conflict dynamics are maximised 'through strengthening conflict prevention, structural stability and peacebuilding' (GFDRR, 2016). GFDRR (ibid.) also warns of the need to ensure that resource allocation does not inadvertently exacerbate social tensions or become politicised. Disaster recovery efforts should aim to have a positive impact on conflict dynamics – through conflict prevention, structural stability and peacebuilding.

Despite examples of projects trying to integrate principles of conflict sensitivity and Do

No Harm into development and humanitarian programming approaches, much of the grey literature starts with the caveat that DRR in insecure environments has long been a neglected area, and has received less attention and donor funding (Mitchell and Smith, 2011). Harris et al. (2013) describe misconceptions between those working on conflict and on disasters, which they argue prevent stronger collaboration. The few exceptions where NGOs have adapted DRM to conflict contexts are largely at the community level (e.g. Christian Aid's work in Palestine and the Democratic Republic of Congo and Tearfund in Afghanistan). Through a review of existing literature on practical approaches to DRR and interviews with selected stakeholders, Harris et al. (2013: 28) characterise the diversity of practical approaches as a 'continuum of intent'. This describes, at one end, DRR interventions that explicitly seek to contribute to conflict prevention and, at the other, DRR interventions that are designed in ways that treat conflict as something to be 'worked around'. Principles and approaches such as Do No Harm may (but equally may not) be adopted as part of the latter, but such interventions remain squarely focused on natural hazards rather than addressing conflict.

Mitchell and Smith (2011) point to the converse: that principles and approaches such as conflict sensitivity and peacebuilding must be hazard-proof. In making the case for closer links between DRM and conflict prevention, Harris et al. (2013) describe a two-way relationship wherein DRR interventions recognise their potential positive and/or negative impact on conflict dynamics (with the ideal scenario one where interventions actively seek to reduce both disaster and conflict impacts), and conflict analysis tools and peacebuilding and state-building frameworks more systematically integrate DRM, recognising the impact of disasters on dynamics of peace and conflict. Over time, frameworks, tools and approaches for disasters and conflict could combine, producing joint conceptual and practical frameworks (Harris et al., 2013). One area of future research would be to identify where this has been trialled in practice, to explore benefits, limitations and possible replicability.

Some grey literature explicitly considers the links between DRR and conflict reduction and management. UNDP (2011) documents examples of community-centred work to build capacities for conflict resolution through the less contentious entry point of DRR. In Sri Lanka, drainage clearance as part of recovery programmes in conflict-affected areas sought to aid local-level cooperation and community cohesion in ways that also enabled broader community capacity development and deepened links between communities and local authorities. Avoiding labelling these as ‘conflict reduction’ activities meant that ‘the national government regarded them as less contentious’ (UNDP, 2011: 9).

Another example concerns action on DRR and conflict management in Kenya. Idris et al. (2013) note the separation – in policy and programming – of action on DRR and conflict management, owing to differences in the threat/hazard, political sensitivities, technical specialism, narrow mandates and separation in programme budgets. The report goes on to recognise that there is a shift in thinking towards more integrated disaster management practices in response to ‘dissatisfaction over a too narrow approach that focused primarily on the hazard itself and not the risk of that hazard or the vulnerability of the people and systems affected by that hazard’ (ibid.: 21). Given the literature currently emerging, this trend seems to have continued – in discussions, if less so in practice.

### 4.3 Human rights, conflict prevention and peacebuilding

The shortcomings of humanitarian disaster response have led some commentators to point to the need to move beyond Do No Harm frameworks, and to actively adopt rights-based approaches. Schell-Faucon (2005) argues that such an approach during the Indian Ocean tsunami response would have offered more positive outcomes for peace, despite the difficulties involved in a context of conflict. In analysis on Sri Lanka and Indonesia following the tsunami, Schell-Faucon (ibid.) found that, while many hoped the scale of the international

response operation would provide opportunities for peacebuilding – given prior international support towards peacebuilding efforts – it was largely unable to facilitate such a change. Likewise, da Costa and Pospiesznac (2014) argue that human rights-based approaches could significantly advance DRR, particularly when linked to legal frameworks on citizens’ rights to protection against disasters (see also Chapter 3). Using cases from Brazil, the Dominican Republic, Ethiopia and Nepal, the authors find that such approaches can contribute to ‘real positive change’, such as participation in politics, consultation in decision-making, transparency, access to justice and rule of law and accountability. They also contend that national legislation for disaster management and DRR, while valuable, will not on its own deliver improved outcomes for affected communities, whereas rights-based principles offer a means to deliver the actions required for effective and efficient DRR in ways that support citizens and offer the protections they need.

More recently, the potential value of linking DRR to peacebuilding and conflict prevention has been discussed. Arguably as a reflection of the timing of the Sendai Framework (UNISDR, 2015) coinciding with UN Secretary-General Antonio Guterres’s (2017a, b, c; 2018a, b) emphasis on prevention and sustainable peace, the relative contribution of the Sendai Framework – and the DRR community at large – to the prevention agenda has been explored. Stein and Walch (2017) explicitly assess the potential of the Sendai Framework as a tool for conflict prevention. Using a framework of socioeconomic, political-institutional and environmental factors, the authors outline how delivery of the Sendai Framework could contribute to certain forms of peacebuilding – when delivered in ways that include but are not limited to inclusion of a diversity of actors, people-centred approaches and the primacy of local and national actors. Taking an intentionally broad definition of prevention, in this light DRR actions offer potential to contribute to the prevention agenda. This is another area that holds potential but requires testing through empirical evidence.

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## 4.4 Simultaneous action on disaster and conflict impacts

Opportunities for assessing the synergies between action on disasters and conflict derive from simultaneous response and reconstruction processes. Two are noted here: overlapping post-conflict and post-disaster reconstruction in Nepal, and ‘divided disasters’ in the Philippines.

Harrowell and Özerdem (2018) use the post-conflict and post-disaster reconstruction processes in Nepal, following the Comprehensive Peace Agreement in 2006 and the earthquake in 2015 respectively, to demonstrate how two entirely parallel processes missed opportunities for exchanging evidence, experience and ideas. They show how post-disaster reconstruction is framed and delivered as apolitical, quoting a representative of the Ministry of Peace and Reconstruction: ‘Disaster is something that everyone comes together. You can forget any past, any disparity or party to the conflict, we’re trying to save one another and trying to come together and work for the common good’ (ibid.: 191). Analysis of the post-disaster reconstruction processes following the earthquakes reveals how even attempts to adopt conflict-sensitive approaches failed to learn from post-conflict reconstruction processes that began almost a decade beforehand. The authors offer two explanations: first, that nearly all international, national and local stakeholders from government, NGOs, donor organisations and academia, but in particular local actors, wanted to avoid what they perceived as the risk of politicising the post-disaster reconstruction process; and second, that these same stakeholders

felt that post-conflict reconstruction was so fundamentally different to reconstruction following a disaster that there was little value in considering them together. Exploring these themes through other contexts would allow for greater consideration of the potential for and limits to complementarity between post-conflict and post-disaster reconstruction processes, and the inherently political nature of both.

A second example of simultaneous action on disaster and conflict impacts comes from Field (2018), who uses the case of the Philippines, specifically Typhoon Haiyan and violence in Mindanao, to explore how decisions over where, when and how to provide humanitarian response are shaped by considerations which extend beyond the matter of who is most in need. Taking neoliberal and neo-managerial principles of effective aid as a starting point, Field shows how the response to the typhoon created competition between agencies, and how it was a better ‘fit’ for agencies wanting to demonstrate speedy and ‘safe’ crisis response. In Mindanao, protracted conflict displacement, poor conditions in IDP camps and unresolved issues over relocation were arguably prolonged by the impacts of the typhoon in other parts of the country. The scale of the disaster and ample opportunities for funding resulted in the redeployment of large numbers of staff and organisations to the typhoon response, and away from the conflict response.<sup>4</sup> Field’s findings point to an underexplored area, namely how simultaneous disasters impact on one another in terms of the distribution of resources and attention and the effectiveness of the response for affected communities.

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4 In 2000, when President Estrada declared war in Mindanao, the opposite happened: staff were redeployed to Mindanao away from the recurrent disaster events (personal communication from Annelies Heijmans).

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# 5 Discussion and conclusion: pushing the boundaries of what we know about DRR in conflict contexts

The literature surveyed here highlights the long history and wide breadth of studies on DRR in conflict contexts (see Table 3) – and is by no means exhaustive. The volume of material has increased over the past two decades, prompted in part by the UN’s International Decade for Natural Disaster Risk Reduction in the 1990s, and interest in climate-related disasters and security in the 2010s. Even so, ‘there is ... relatively limited understanding of how disasters interact with, and unfold in, conflict-affected areas’ (Siddiqi, 2018: S161). Based on our review, this could be nuanced: there is relatively little that has been robustly documented. Grey literature has numerous examples of community-based and non-government actors engaging in DRR in conflict contexts, but this has not been recorded, verified or shared in ways that advance DRR practice.

Despite decades of quantitative and qualitative research focused on attribution, we still understand very little about the relationship between disaster and conflict, and there is very little guidance on how to confront and seek to alter this relationship with a view to accelerating disaster resilience. There is a great deal of research on certain aspects of these relationships, but there are also significant gaps. Inadequate understanding of how disasters and

conflict interact and their impact on efforts to achieve risk reduction may in part be because the relationships between disaster and conflict are complex and involve many mediating factors. As a result, research tends to raise more questions than it answers. Getting to grips with the nuances of the complex relationship between disaster and conflict is even more difficult in dynamic operational contexts subject to rapid change, for instance in patterns of human mobility, information and political alliances. Most studies included in this review have been case studies of specific disaster events or theoretical studies debating whether disasters exacerbate or mitigate existing conflicts, or cause or prevent new ones. Little scholarship exists on how DRR can effectively be implemented in fragile or conflict-affected contexts (and even less on lessons learned, or what was tried and failed). Where DRR is being undertaken in these difficult operating environments, this is often not written up in a way that is easily transferable to project design and delivery, or policy and funding advice.

In order to increase understanding of relationships and to forge pathways for the DRR community to reduce disaster risk and potentially contribute to peacebuilding, we encourage academic focus on these gaps, rather than contributing more to already over-populated

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areas of research (such as ‘disaster leading to conflict’ studies). It is perhaps in these new perspectives that we will move forward the needle of understanding. Based on our review we identify a number of gaps in the evidence which point to potential new directions in disaster–conflict research – starting with ‘more of the same’, taking a different approach and pushing the boundaries of what we think we know about disasters and DRR in conflict contexts.

### **Building on normative approaches: continuing on the same path**

- There is a need for a systematic review of evidence that organises practical examples of interventions by DRR ‘type’ (hazard type, intervention, etc.) alongside a typology of conflict to better understand what’s been tried and learned, and what can be tailored to support application in other contexts experiencing similar challenges. There is an equal need to articulate the extent to which the replication of lessons to other contexts and projects is feasible, given the context-specificity of disaster-conflict situations.
- A more action-oriented research agenda will require further work to expand the breadth of examples and depth of analysis of the role of conflict in undermining conventional approaches to DRR – positioning these across the continuum from working ‘in’ to working ‘on’ conflict. This may also help inform a deeper understanding of the range of alternative entry points to DRR in conflict contexts, with a view to developing a more thorough understanding of what’s been tried already.
- A substantial proportion of grey literature derives from NGO projects that aim to build community resilience to intersecting disaster and conflict risk. What has not been undertaken is a thorough analysis of the design, delivery and sustainability of non-governmental DRR actions in relation to formal DRR structures. The assumption is that non-governmental actors are stepping in to complement or backfill state actions on DRR, but better understanding is required of how those interventions affect citizens’ perceptions of the state, and their viability

and sustainability. An independent review is required, including returning to the site of CBDRR project-based interventions, to better understand what works and what doesn’t in non-state interventions designed to support communities to be disaster-resilient in conflict-affected contexts. Assessments of whether interventions were ‘successful’ should reflect the expectations and ambitions of affected communities.

### **Sidestepping normative approaches to DRR: encouraging a different perspective**

- There remains much we don’t know about people’s lived experiences of the intersection of disasters and conflict. Starting with the active and participatory role of individuals and communities in situations of disasters and violent conflict (Molenaar, 2011) may enable a greater understanding of what people actually do in such situations. Independent research, including longitudinal studies, could unpack those experiences, with an emphasis on the choices and trade-offs of the actions that people take, and why they take them. This could provide a more grounded starting point from which to design interventions complementary to people’s coping capacities in the face of disaster and conflict risk.
- Little work has been done to connect people’s lived experiences, individual agency-led interventions, sub-national or national structures for DRR and national and international policy commitments. As such, there is a need to link the ambition to build disaster resilience across scales, from individual to international. Such an analysis needs to be deeply intertwined with analysis of conflict dynamics across scales to understand where there are viable entry points, barriers or points of contention. Such an analysis may lead to alternative approaches to those we have at present – including drawing on ideas of hybrid governance or institutional bricolage (Cleaver, 2012).



- The literature makes reference to poorly designed DRR strategies having negative impacts on conflict dynamics, but this has not been robustly investigated. Agency-related reputational risks aside, there could be value in reviewing monitoring and evaluation project documents to identify cases where this can be either substantiated or rebutted, with a view to providing lessons to inform future design. Conversely, more emphasis on examples where effective DRR has improved perceptions of government (Walch, 2018).
- By extension, based on the continuum described above, a deeper understanding of the potential for DRR to contribute to peacebuilding, conflict prevention and conflict resolution is required. A collaborative research process utilising ‘conflict’ and ‘disaster’ specialists would help in cross-fertilising knowledge and ensuring that any claims of the contribution of DRR to ambitions for peace are valid and substantiated. DRR could be implemented as a process/transition from minimum or community-based DRR to more institutionalised, national and sustainable DRR adapting to conflict dynamics, post-conflict conditions and fragility.
- The current evidence base is concentrated on disaster events as the entry point for analysis, with a focus on local-scale disaster impacts. A longer-term historical perspective (akin to Artur, 2018), which includes emphasis on the evolution of national policy architectures for DRR, would help in producing recommendations for policy and practice that reset expectations of what can be achieved over what particular timescale; in the Philippines, for example, it took more than 25 years for the government to move from reactive emergency response to proactive DRM policy and practice.

## Pushing the boundaries of what we know

- DRR in conflict contexts could consider taking a more explicitly political stance and building on social movements to explore the transformative potential of holding power-holders to account and utilising DRR as an entry point for reworking power relationships to reduce risks.
- Many communities experiencing the ‘double vulnerability’ of disaster and conflict risk are ‘off the radar’: we know little about them, and they may have vastly different ideas about what disaster resilience does or could look like. This may include experiences of disasters and DRR in areas under the control of non-state armed groups. There has been little research exploring the role of alternative governance mechanisms and parallel governance structures specifically in contexts of violence and armed conflict, and the implications for understanding and acting on disasters, and subsequently for the opportunities for and limitations of DRR.
- There is also a gap in our understanding of what happens at the sub-national scale, and specifically the provincial level, on the disaster–conflict nexus (what Mena et al. (forthcoming) refers to as the meso level): for example at the level of the local commander, warlord, or mid-range authority.
- Finally, a welcome contribution would be evidence that provides non-Western perspectives and norms that do not comply with the traditional idea of a social contract. Examples include social contracts between groups and tribal leaders, rather than between individuals and the national government. Other elements of culture, including time orientation, masculinity/femininity, power distance, collectivism/individualism and uncertainty avoidance, may also shed light on why some interventions, strategies and concepts may be applicable in some places but not others.

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