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Catastrophes, Confrontations, and Constraints

How Disasters Shape the Dynamics of Armed Conflicts

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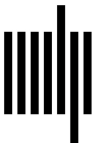
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2 After the Disaster: Motives, Strategies, and Incentives for Conflict (De-)escalation

This chapter builds the theoretical framework for this book, thereby providing a comprehensive overview of the potential interlinkages between disasters and armed conflict dynamics.¹ As outlined in chapter 1, armed conflict refers to a contested incompatibility between a government and a rebel (or insurgent) group (and their respective allies) involving the systematic use of armed, physical violence. This definition covers violence against civilians as part of an armed confrontation. Most armed conflicts I consider are civil wars.

The framework established here is based on two dimensions (see table 2.1 later in the chapter). First, if disasters influence the dynamics of armed conflict, they might contribute to either its escalation or its de-escalation. An armed conflict escalates if the intensity of the fighting increases, resulting in a higher number of battle-related deaths. Conversely, armed conflicts de-escalate if fewer battle-related deaths occur, hence indicating a lower frequency and/or intensity of battles. The horizontal dimension of the framework refers to the possibilities of armed conflict escalation and de-escalation.

A third possibility is that disasters have no impact on the dynamics of armed conflicts. Mariya Y. Omelicheva's (2011) statistical analysis, for instance, finds no robust link between disaster occurrence and political instability. One reason for this might be that the disaster is not severe enough or occurs far away from locations relevant to the armed conflict (Ide et al. 2020). Another option is that disasters do not affect armed conflict dynamics because other drivers are more important. A recent review of the literature on climate change (including climate-related disasters)

1. If arguments from the literature on armed conflict onset are applicable to conflict (de-)escalation, I include them as well.

and conflict concludes that factors “such as low socioeconomic development and low capabilities of the state . . . are judged to be substantially more influential” (Mach et al. 2019: 193). Armed groups usually fight over political power or territorial control rather than disaster impacts. If disasters do not affect the groups’ fighting capabilities or revenue streams, they are unlikely to have an impact on their strategic decisions (Blattman and Miguel 2010; Cederman and Vogt 2017). Finally, the different escalation and de-escalation dynamics that disasters can trigger (see below) might equal out. This would imply that disasters do affect armed conflicts, but the net effect in terms of battle-related deaths still converges around zero.

In this study, I primarily seek to explain the dynamics of armed conflict escalation and de-escalation after disasters (which are also more policy relevant; see chapter 1). However, non-escalation occurs rather frequently, and the respective cases are important in the analysis to separate relevant from irrelevant factors.

The second (vertical) dimension of the framework refers to the drivers of armed conflict dynamics. Three approaches can be distinguished here. The first one focuses on the *motive* of actors, typically of combatants, leaders, and supporters of armed groups. Already half a century ago, Ted Robert Gurr (1970) proposed that relative deprivation—people perceiving that they are less well off than they should be, especially vis-à-vis other social groups—is an important source of political conflict. Subsequently, researchers have argued that socio-economic inequalities, political marginalization, and (instrumentally) revived “ancient hatreds” (Kaufman 2001: 3) are important drivers of armed conflict. Confirming these assumptions, more recent cross-case studies find that ethnic polarization (Esteban et al. 2012), low income levels (Chaudoin et al. 2017), and the absence of democratic freedoms (Lacina 2006) tend to increase armed conflict intensity. Ethnic integration, secure livelihoods, and high levels of democracy and human rights protection, by contrast, should reduce conflict risks.

In the early 2000s, Paul Collier and Anke Hoeffler (2004) argued that previous approaches are overly focused on grievances and therefore unable to explain how collective action problems can be overcome. In other words, why should individuals risk participating in armed conflicts to achieve more inclusive political and economic systems if they receive the same public goods when their ethnic or class comrades win the struggle without their support? Instead, Collier and Hoeffler propose that individual greed is

driving people to participate in armed conflicts—for example, to gain profits from natural resource incomes captured during a war. There is indeed evidence for high resource rents increasing conflict intensity (Ross 2004). However, greed and grievances are often deeply intertwined (Ballentine and Sherman 2003; LeBillon 2001), and disasters have at best a modest and short-term influence on greed-related factors, such as when they complicate natural resource extraction and trading (Ramsay 2011; Tominaga and Lee 2021).

More important for this framework is that all the approaches discussed essentially agree that human motivations and motives are central to the dynamics of armed conflict. The more aggrieved individuals are, and the more they seek to improve their personal or group's situation, the more likely they are to join an armed group (either the rebels or the government). Further, the larger these groups grow, the more intense the respective violent conflict will be. Similarly, if we conceive armed groups as agents of a certain social group (their constituency or principal), more intense grievances and demands among the members of this group will increase the willingness of the agent to engage in violence (Wucherpfennig et al. 2012). Conversely, if individuals are less aggrieved about their situation and less hostile toward others, armed conflict intensity should decline. In line with these arguments, several studies find that wealth differentials (Buhaug et al. 2014), the political exclusion of ethnic groups (Cederman et al. 2010), and perceptions of unfair disadvantages (Siroky et al. 2020) increase violent conflict risks.

The second approach to explaining armed conflict dynamics is focused on *strategy*, or rather the strategic environment armed groups face. Gurr (1970) already acknowledged the role of governments' repressive or accommodating capacity as well as the challengers' organizational capability. In an influential article, James D. Fearon and David D. Laitin (2003: 75) argue that "not ethnic or religious differences or broadly held grievances but, rather, conditions that favor insurgency" are most powerful in explaining variation in civil war occurrence and intensity. Grievances, as well as greed motives, are far too common to have significant explanatory power. By contrast, the opportunity structures that allow social groups to act on these motives are far more important in shaping civil war risks.

Several empirical studies confirm the plausibility of this approach. Fearon and Laitin (2003) find that, among other factors, state weakness and mountainous terrain increase the prevalence of civil war. Weak states are less capable of suppressing rebel groups, while mountains or other forms of inaccessible

terrain provide hideouts and hence increase the capability of insurgents to wage war. In the short term, certain weather conditions such as low visibility (e.g., due to fog or sandstorms) provide opportunities for surprise attacks, thus increasing conflict intensity (Carter and Veale 2013). Similarly, external financial support and revenues from high-value natural resources boost the fighting capacity of armed groups, while high levels of dependence on civilians for financing provide a constraint on violence (Salehyan et al. 2014). According to Samuel Bazzi and Christopher Blattman (2014), rising prices of export goods, among other factors, make civil wars less deadly because the fighting capacity of the state vis-à-vis the rebels is improved.

I label the third approach used in my analysis *communication* (or *violence as communication*). It emerges from several concerns. Armed conflict research, including work on disasters and conflict, is overwhelmingly concerned with armed conflict onset (Chaudoin et al. 2017). From a practical perspective, such a focus is of limited relevance. Although it might help prevent armed conflict onset, it provides little guidance in regard to curbing violence during armed conflicts and building peace afterward (Beardsley et al. 2019; Woodward 2007). More important for this study is the consideration that “determinants of conflict severity seem to be quite different from those for conflict onset” (Lacina 2006: 276; see also chapter 1). This connects to Stathis N. Kalyvas’s (2006) prominent argument that a range of factors at various scales account for the dynamics of violence in civil wars, several of which are quite different from the macro-cleavages underlying the civil war and the drivers of the war’s onset.

Relatedly, strategy-based approaches conceive armed groups (including government forces and rebels) as reacting in a more or less rational way—depending on the information they have and can process—to their material environment. The latter includes the strength of the opponent, the availability of financing opportunities, and the ability to recruit fighters, among others. But the use and non-use of violence in civil wars can also have an important signaling function—that is, conflict escalation or de-escalation is supposed to convey a message and represents “a mode of information exchange” (Raleigh 2012: 463). This use of violence is also strategic in nature. It is not a direct response to a material environment but indicates the need and/or will to send a message. In the words of Benjamin Lessing (2015: 1504–1505), “Another elemental function of violence is as a signal. In this view, acts of violence—quite apart from their physical, ‘battlefield’

effects—convey important information about the perpetrator’s operational capacity, resolve, internal cohesion, and so on.”

This signal or message can be directed toward various audiences. Violence might be a “costly signal” (Kydd and Walter 2006: 50) to the government that rebel groups are still present and ready to fight, which is particularly important if the government declared the respective conflict over or if the government (or some external actor) excluded the specific group from negotiations. Similarly, armed groups can use violence to demonstrate their control of, or at least presence in, an area, hence indicating that disobedience and cooperation with the government will be costly, including for civilians (Boyle 2009; Kalyvas 2004). At the same time, actors might restrain their use of violence against certain actors (e.g., civilians) or during certain periods (e.g., cease-fires) to convey a positive image of themselves, particularly if they are dependent on the support of civilians, democratic states, or the international community (Fortna et al. 2018).

Furthermore, civil wars are rarely dyadic, but often characterized by the competition of multiple groups, on both the government side (e.g., the state military, pro-government militias) and the rebel side (e.g., several rebel factions) (Jentzsch et al. 2015). These groups frequently use violence to demonstrate to their constituency or (civilian) support group that they are capable and determined to fight for their cause, while moderate groups are weak and irrelevant (Boyle 2009; Valentino 2014). This can increase group coherence, which “generates attention and recruits in a competitive environment and hence may convince others to transfer loyalty” (Raleigh 2012: 472). According to Kalyvas (2004), the targeting of civilians (rather than armed forces or military infrastructure) is typical for violence-as-communication because it is “cheap”—that is, associated with few losses and risks.

The logic of communication can complement and even override motives and strategic concerns in conflict situations. For example, even if the government has made concessions, rebel groups might escalate violence to show their continued presence on the ground and to signal to their constituencies that they will not accept compromises. Likewise, even if the strategic environment is conducive to a military offensive, rebels can exercise constraints to improve their reputation among key supporters (e.g., civilians or other states). So far, the communication approach has received very limited attention in research on disasters and armed conflict. Reasons for this include a focus on conflict onset or prevalence rather than intensity

(Hultman and Peksen 2017; Lacina 2006) as well as a largely “positivist–rationalist” orientation of the field (Ide 2016: 69).

In reality, these three approaches are not necessarily mutually exclusive but often overlap with and even reinforce each other. Reduced grievances can provide fewer strategic opportunities for the recruitment of new fighters, while a group with newly gained revenues and recruits can escalate violence to both capitalize on this opportunity and signal its new strength to civilians, opponents, and international actors. Sometimes, studies even draw on the same data to measure different concepts. Low per capita income, for example, has been used as a proxy for the existence of both economic grievances and weak statehood. Alternatively, two or more approaches can be present at the same time and cancel out each other’s impacts. A heavy counterinsurgency campaign by the government, for instance, can increase motivations for rebel attacks (owing to the associated human rights violations) and simultaneously undermine the capability for such attacks (as more rebel fighters are killed and captured).

Yet, it is still important to distinguish analytically between these three approaches or logics of violence in armed conflicts for at least two reasons. First, from a practical point of view, it is highly important to know the drivers behind violent conflict (de-)escalation in order to address the associated risks. While conflict de-escalation often falls short of solving the conflict, it saves lives and provides opportunities for mediation and the delivery of humanitarian assistance (Beardsley et al. 2019). In terms of policy, measures to address grievances (e.g., land reform) differ considerably from those tackling strategic environments (e.g., arms embargoes) or violence-as-communication (e.g., providing selective support to moderate groups).

Second, research has highlighted that both climate security and disaster-conflict research lack a decent understanding of the causal mechanisms connecting both phenomena (Buhaug 2015; Reinhardt and Lutmar 2022). However, “we do not have an adequate explanation of the phenomenon under study until we can say why the model works” (McKeown 1999: 172). Put differently, in order to make sure that a correlation or sequence of events is not just coincidental or driven by some unobserved factors but represents a causal relationship, we need to trace the pathways connecting an event (here: a disaster) to its supposed consequences (here: conflict escalation or de-escalation). Approaches that specify different, theoretically plausible causal links support this endeavor.

Table 2.1

Theoretical framework of this study

	Escalation	De-escalation
Motive	Grievances	Solidarity
Strategy	Opportunity	Constraints
Communication	Costly signal	Image cultivation

Table 2.1 combines the two relevant dynamics of armed conflicts after disasters (escalation and de-escalation) with the three approaches to explaining violence in ongoing conflicts (motive, strategy, and communication). The resulting matrix specifies six possible impacts of disasters on conflict dynamics that structure my empirical analysis: grievances, solidarity, opportunity, constraints, costly signal, and image cultivation. The remainder of this chapter discusses these six impacts in greater detail.

Grievances

Disasters can lead to intense grievances among segments of the affected population. Events like earthquakes, storms, and floods often have significant material losses, such as houses, animals, savings, or productive assets. Losses might also be emotional—for example, friends or family members who die or are injured during the disaster. People who believe that state authorities have not done enough to protect them from or support them after a disaster can quickly grow frustrated (Drury and Olson 1998) and lose trust in the relevant authorities (Kang and Skidmore 2018). In the same vein, grievances can also result from a shortage of valuable resources after a disaster, such as food, water, or land (Brancati 2007). High food prices in particular may result from disaster-induced destruction of storage facilities, supply lines, and agricultural assets and are closely linked to political dissatisfaction (Hendrix and Haggard 2015) and armed conflict risks (Koren and Bagozzi 2016).

This is particularly the case when disasters are a product of pre-existing inequalities and power structures and hence lay bare socio-economic fault lines (Albala-Bertrand 1993). Grievances will be particularly intense if certain groups are privileged during disaster preparation, emergency relief, or reconstruction. One should note here that while disasters often reveal and

even contribute to existing inequalities, grievances can occur even if this is not the case. It is sufficient for people to perceive that disasters cause or deepen inequalities. According to Ramesh Ghimire and Susana Ferreira (2016: 26), “Individuals commonly blame the government for natural disasters regardless of its responsibility and response, leading to hostility towards the government.” If rebel groups control parts of the disaster-affected territory and fail to provide adequate or unbiased support, they will face resentment by the population as well. Perceptions of the distribution of various forms of support—such as rescue operations, food rations, or financial compensation—after the disaster are particularly contentious owing to their high visibility (De Juan et al. 2020; Rahill et al. 2014).

Government reactions to disasters that do not include the fair distribution of relief and reconstruction aid might also increase grievances. The evacuation of local people from supposedly disaster-prone areas, which are then used for business development or military purposes, has received intense criticism (Klein 2007; Siddiqi and Canuday 2018). Also, in anticipating discontent and protests, especially authoritarian governments tend to increase repression in the aftermath of disasters, such as by arresting activists, blocking NGO access, and breaking up demonstrations (Pfaff 2020; Wood and Wright 2016). Similar measures, which are not very popular in times of grief and need, can be pursued by rebel groups if they control a certain territory or seek to do so (Arjona 2014). Eunbin Chung and Inbok Rhee (2022) even detect a general increase in hostility toward out-groups after disasters.

Furthermore, disasters might increase grievances via migration. In general, migration is an important coping strategy to deal with environmental extremes, including disasters (Black et al. 2011). Getting out of harm’s way during, for instance, an earthquake or a storm and returning to an area after it is safe is a rather common short-term pattern with little impact on grievances. But one or several household members might migrate for longer time periods to more prosperous and/or urban areas to earn additional income that helps with post-disaster reconstruction and building resilience to future events. In extreme cases, permanent migration of larger groups of people can occur if livelihoods in a region become unsustainable because of disaster losses (Berlemann and Steinhardt 2017).

Such migration is typically intrastate and of short distances because networks and funds for international migration are lacking (Groth et al. 2020). Yet it can still cause grievances if migrants shift ethnic balances in the

receiving region (hence fueling inter-ethnic rivalries), cause competition for scarce resource, or do not receive sufficient government support (Brzoska and Fröhlich 2015; Ghimire et al. 2015). Recurrent storms, floods, and droughts in Bangladesh, for example, amplified migration flows to slums in Dhaka and the Chittagong Hill Tracts in India, thereby increasing resource competition in the former and ethnic tensions in the latter (Reuveny 2007; Saha 2012). Vally Koubi and colleagues (2018; 2021) also find that people migrating after experiencing several extreme weather events are more likely to have severe grievances and to join political movements.²

Disaster-related grievances can drive the escalation of armed conflicts in various ways. Aggrieved parts of the population can push the rebel groups fighting for their cause to increase their efforts or even join the rebels themselves. Conversely, if non-state armed groups control a territory but are unable to provide adequate disaster-related “rebel governance” (Walch 2018a: S248), people might turn their support to the government or pro-government militias. Either way, an increase of local support increases the fighting and intelligence capabilities of an armed group, thereby driving conflict escalation. Supporting this approach, Jonas Vestby (2019) finds that droughts have a negative impact on the perceived living conditions, which in turn increases the willingness of individuals to participate in violence. Further, according to Adrien Detges (2017), severe droughts raise the endorsement of political violence among politically dissatisfied parts of the population.

Solidarity

The occurrence of a disaster can also lead to increased solidarity and cooperation, hence facilitating conflict de-escalation. In their review of several case studies, disaster sociologists Charles E. Fritz and Harry B. Williams (Fritz and Williams 1957: 48) concluded the following:

The net result of most disasters is a dramatic increase in social solidarity among the affected populace during the emergency and immediate postemergency periods. The sharing of a common threat to survival and the common suffering produced by the disaster tend to produce a breakdown of pre-existing social distinctions and a great outpouring of love, generosity, and altruism.

2. However, when studying internal migration in Bangladesh, Kristina Petrova (2021) finds that severe floods increase the likelihood of migration but that such migration does not lead to more protests in the receiving areas.

According to Fritz and Williams, this reaction is a form of psychological coping with disasters at the individual level and functionalistic for community recuperation. Follow-up studies also find that community conflict is notably absent in the first few months after a disaster. This is because the disaster represents a common threat, facilitates identity building through the notion of shared affectedness, and sets clear priorities, goals, and incentives for working together (Quarantelli and Dynes 1976). As a result, social trust and cohesion rise, although this effect is often limited to the immediate post-disaster period (Calo-Blanco et al. 2017; Toya and Skidmore 2014). Once conditions return to normal and/or questions related to the distribution of reconstruction funds emerge, pre-existing conflicts and divisions may return.³ In line with this, violence against civilians by armed groups also tends to decline in the first few months (and even years) after a disaster (Haer and RezaeeDaryakenari 2022).

The literature on disaster diplomacy builds on these insights while connecting them more thoroughly with questions of high-intensity conflict and peace (Kelman 2012; Streich and Mislán 2014). It hypothesizes that disasters provide opportunities for diplomacy in the forms of negotiation and disaster-related cooperation between hostile parties. Potential reasons for this include increased solidarity between leaders or populations, emerging perceptions of shared external threats, and cooperation between conflicting groups in disaster preparation, emergency relief, or reconstruction. Summing up two decades of research, Ilan Kelman (2018: 175) concludes, “Disaster-related activities do not create new initiatives in achieving peace or reducing conflict, but a diplomatic process with pre-existing conditions can be catalysed or supported,” at least in the short to medium term (6–12 months after the disaster).⁴ The literature on environmental peace building is slightly more optimistic that shared environmental challenges can contribute to building trust and understanding between parties with tense relations (Ide 2019; Johnson et al. 2020).

Such an increase in solidarity, cooperation, understanding, and diplomacy might reduce the grievances that fuel an armed conflict. Increased

3. But note that other studies find a positive effect of disasters on trust one and a half years and more after the onset of the event, contingent on high levels of social capital in the pre-disaster period (Dussaillant and Guzmán 2014).

4. Pre-existing conditions refers to factors like the current absence of high-profile political conflicts, the existence of informal networks, and the willingness of leaders to use the disaster for diplomacy, among others.

community coherence can address local tensions, at least temporarily. This leads to a de-escalation as the settling of pre-existing scores at the community level is an important driver of violence in civil wars (Kalyvas 2006). Solidarity with affected populations in the territories of rival groups and the desire to allow relief provision could also result in fewer armed activities in the aftermath of a disaster. Rune Slettebak (2012) indeed finds that climate-related disasters decrease armed conflict risks, although his study focuses on conflict onset (rather than intensity) and does not test any causal mechanisms. According to Alexander De Juan and colleagues (2020), regions in Nepal that were hit harder than others by the 2015 earthquake experienced a reduction in social conflict. Providing more explicit support for a disaster diplomacy perspective, cross-case research by Joakim Kreutz (2012) indicates that disasters facilitate peace talks and cease-fires.

Finally, disasters provide opportunities for governing actors to demonstrate their skills and responsiveness (Toya and Skidmore 2014). This is the case if disaster prevention and warning efforts are credible, if sufficient resources are mobilized and used fairly and efficiently, and if leaders show compassion toward the affected populations (Olson and Gawronski 2010). If the reputation of the government becomes more favorable, rebels might face less pressure by their constituencies to engage in attacks (and might have a harder time recruiting combatants for such attacks), hence resulting in a de-escalation of violence. But rebel groups can also use disaster response to win the hearts and minds of the local population, thus establishing firm control over a territory. Once a rebel group establishes such control, the intensity of violence usually declines because local scores are settled, government-rebel interactions decline, and there is less need to clear the front lines (e.g., by killing civilians perceived to support the other side) (Balcells 2010).

Opportunity

According to Philip Nel and Marjolein Righarts (2008: 164), disasters provide opportunities for groups to accumulate “collective action resources” that enable them to intensify an armed conflict. This might happen in several ways. First, disasters lower the opportunity costs for participating in armed conflict. Individuals joining such an endeavor face a high risk of capture, injury, and death and therefore tend to seek opportunities in other economic sectors. However, disasters can cause enormous economic

disruptions, such as when an agricultural area faces a drought or when production and service businesses are destroyed by storms, floods, or earthquakes. The resulting loss of livelihoods can make it easier for both government militias (Eastin and Zech 2022) and rebel groups to recruit followers as deprived individuals have few legal choices to generate income (Barnett and Adger 2007). Successful disaster governance, particularly by rebel groups, can also increase an actor's prestige and further facilitate the recruitment of followers (Arai 2012).

Enhanced recruitment is often associated with an escalation of armed conflicts. For one, the capabilities of the recruiting armed group to gather intelligence and stage an attack improve. Also, competing groups might well recognize the boost in strength of a competitor, increasingly perceive the respective actor as a threat, and attack it before it can fully capitalize on its newly gained numerical advantage. Political conflict studies have long identified shifts in the balance of power between rival parties and the associated dynamics of over-demanding by the weaker party and preventive aggression by the stronger one as a source of violent conflict (Organski and Kugler 1980). A rebel group reaching a certain level of strength can also choose to abandon guerrilla strategies in favor of open warfare, which causes more casualties (Butler and Gates 2009).

Recruitment is not the only way that disasters can (potentially) shift balances of power in a conflict region. In the aftermath of an extreme event, large amounts of relief and reconstruction support often flow toward the affected region. After the 2010 floods in Pakistan, the 2004 Indian Ocean tsunami, and the 2010 earthquake in Haiti, the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA 2019) channeled almost US\$4 billion of humanitarian aid to the disaster-stricken areas. Acquiring such funds through negotiation or appropriation will boost the strength of an armed group because it can pay more recruits, hire specialists, or purchase additional weapons and equipment.

Consequently, government and insurgent troops will seek to gain control of the disaster-affected territories, usually by force, hence driving conflict escalation. Similarly, rebels might attack these areas in order to sabotage aid projects that are intended to strengthen the social contract between the government and the population (Zürcher 2016). Recent studies find that "areas where aid is being distributed are targeted more heavily [by terrorist groups] than areas without aid distribution" (Nemeth and Mauslein 2020:

382). According to Kyosuke Kikuta (2019), districts with higher reconstruction rates after the 2004 tsunami in Sri Lanka experienced higher levels of violence as armed groups competed for their control. Groups like al-Shabaab in Somalia have also taxed and stolen drought-related food aid for military purposes (Levy and Yusuf 2021).

One of the most frequently discussed causal pathways between disasters and armed conflict is the emergence of a power vacuum or of state weakness (Brzoska 2018; Hollis 2018; Meierding 2013). Disaster can limit the access of state forces to certain areas (e.g., because roads are washed away), thus providing the rebels with an opportunity for military expansion and territorial or organizational consolidation. In such a power vacuum, states might be unable to protect civilians and punish opponents. This reduces the opportunity costs for joining a rebel group (Berrebi and Ostwald 2011). In situations of persistent insecurity, civilians also often turn to non-state armed groups for the provision of public goods like protection from violence or disaster relief (Kalyvas and Kocher 2007).

State weakness is also relevant outside the affected area. Economic growth might decline in the face of intense or recurrent disasters that affect agricultural yields, infrastructure, and productive assets, thereby decreasing the tax base of the state. This, in turn, reduces its military strength and capability to support its population and/or politically relevant elites. Similarly, governments might draw troops and funds to the disaster-affected regions, making other parts of the state territory more vulnerable to rebel recruitment and attacks. In line with this, Peter F. Nardulli and colleagues (2015) find that the positive impact of rapid-onset disasters on civil unrest is even stronger outside the area where the disaster strikes.⁵

However, disasters can also weaken rebel groups, hence providing strategic opportunities for the government to escalate the conflict in order to achieve gains on the battlefield. Rebel infrastructure and bases might be hit hard, vegetation can be destroyed and no longer serve as a hideout, combatants are perhaps injured or may have been killed in the disaster, and civilian populations could face hardships that make them unable to provide support (such as food, taxes, or information) to the insurgents. Furthermore, assistance provided by the government (most likely amplified by international

5. This finding could also provide support for the disaster-migration-grievances pathway discussed above.

actors) likely reduces territorial control of the rebel group, leading to blurred front lines that increases violence in civil wars (Balcells 2010). If the disaster affects rebel strongholds and the government provides relief, improved intelligence gathering by state agencies can further weaken the rebels and pave the way for a military offensive by the government (Eastin 2018).

Constraints

Many of the possible impacts of disasters discussed in the “Opportunity” section might also provide constraints for armed groups, thus facilitating conflict de-escalation. Most obviously, disasters affect transportation infrastructure—for example, by destroying bridges, flooding roads, or rendering secret forest paths impassable due to storm damage. These impacts reduce the troops’ mobility and their capability to engage in fighting activities. If agriculture is heavily affected by the disaster, the military, militias, and rebel groups are likely to face food shortages, which reduces their ability to engage in violence, at least over large areas and extended time periods (Bagozzi et al. 2017). Idean Salehyan and Cullen Hendrix (2014) draw on these arguments to explain their finding that drought-induced water scarcity reduces incidences of political violence. In particular, part-time combatants fighting for insurgents or militias at certain times (but who engage in “normal” economic activities at other times) might be too busy with securing their livelihoods and reconstruction work to participate in armed conflict in the post-disaster period (Venugopal and Yasir 2017).

Disasters can also facilitate conflict de-escalation by reducing the capabilities of the warring parties to use violence. This is the case when, for example, military bases, personnel, and equipment are adversely affected by the disaster. The economic damage caused by disasters also reduces the tax base of both the government and rebel groups (particularly if the latter have limited access to outside support or valuable resources), which inhibits their ability to purchase equipment and pay combatants. Governments might also have to re-direct financial and military resources (e.g., troops or machinery) for post-disaster rescue, relief, and reconstruction activities (Kreutz 2012). Further, rebel groups face recruitment constraints that go beyond the (temporary) loss of supply lines and financial assets because “significant state government assistance in collaboration with the international humanitarian actors in rebel areas is likely to lead to a loss of territorial control for the

rebel group, making its recruitment activities more complicated and risky” (Walch 2018b: 337). Alternatively, a government or rebel group unable to manage a disaster adequately can suffer from a loss of popular support among the population, reducing its financial and recruitment base.

Going beyond the short-term capabilities of the conflict parties to wage violence, disasters may also affect the more long-term strategic considerations of the conflict parties. Ripeness theory suggests that parties of an armed conflict generally prefer to pursue their goals by unilateral means, usually through the use of violence. However, at some point in time, the parties might conclude that victory is no longer possible and that to continue the conflict would impose considerable costs on them. Such a “mutually hurting stalemate” defines the moment when a conflict is ripe for resolution as the opponents start perceiving peace to be more beneficial than war (Zartman 2000: 228). By weakening the government and the rebel group in both financial and military terms, disasters can contribute to the emergence of ripe moments for conflict resolution, with conflict intensity declining during the exploratory talks and negotiation period.

Kreutz (2012) draws explicitly on ripeness theory in his study on disasters and separatist conflict resolution. He finds that short-term peace talks and cease-fires, but not the conclusion of peace agreements, are more likely after disasters. While an increase in cease-fires fits well with the reduced capabilities explanation discussed above, support for ripeness theory is more limited given the lack of significant findings for peace agreements. Likewise, Stephen Nemeth and Brian Lai (Nemeth and Lai 2022) conclude that negotiations in civil wars are more likely after a disaster that hits both the government and the rebels. They attribute this finding to a general weakening of both sides, reduced expectations of imminent victory, and the need to support civilians.

Costly Signal

Disasters can increase the intensity of violence-as-communication during an armed conflict in various ways. To start with, rebel groups and governments rely on various forms of support. Local populations, for instance, can provide taxes, recruits and a hideout for the rebels but can also supply pro-government troops with food or information. Various external states might channel financial support and military goods to the conflict parties

(Salehyan et al. 2014) or provide legitimacy by backing their demands (Duyvesteyn 2017). The different forms of support are usually contingent on the respective group being perceived as capable and determined to fight for its cause. Should doubts occur that this is still the case after a disaster, or should the armed groups only fear that such doubts might emerge, the groups are likely to stage violent attacks in order to demonstrate their continued presence and strength. More extremist groups might try to outbid their moderate counterparts to gather support (Conrad and Greene 2015). One way to do so is by rejecting disaster diplomacy and relief cooperation while increasing fighting intensity to illustrate their uncompromised stand for a certain cause. State actors can also demonstrate their determination (and distract from their disaster preparation failures) by intensifying military activities (Lee et al. 2022).

Likewise, when a disaster causes a noticeable decline in fighting capability, armed groups might react with a small- to medium-scale offensives to demonstrate their strength to opponents. Attacking civilians could be a particularly “attractive” (yet morally highly problematic) option as they are easy to target, even with reduced military capabilities (Haer and RezaeeDaryakenari 2022). By staging such “symbolic attacks,” a conflict party aims to prevent its opponent’s offensives during a period of vulnerability. An increase in violence might also send an intimidating signal to the civil population, namely that the armed group is still capable of retaliating against those supporting other conflict parties (Kydd and Walter 2006). This issue is particularly salient for rebel groups facing government (and international) actors moving into their territories to support civilians through relief operations and reconstruction efforts, which could also result in the government collecting information and the population being less loyal to the rebels (Walch 2018b). But Benjamin E. Bagozzi and colleagues (2017) also find evidence that armed groups use violence against agricultural populations during droughts to signal that they do not tolerate resistance against food extraction by the rebels in these areas.

Michael J. Boyle (2009: 268) argues that the intensification of violence frequently results from a “fear of political exclusion.” In such situations, a conflict party is not represented at the bargaining table and protests against this exclusion through the use of violent attacks, simultaneously demonstrating its relevance. This could explain conflict escalation in the face of post-disaster moves toward conflict resolution caused by increased

solidarity or restraint (see above). Perhaps more relevant, non-state armed groups may aim to underline their territorial control or at least their ability to wage violence in certain places, demonstrating that they at least must be consulted when post-disaster aid is distributed. The safety of aid workers is an important concern among many international organizations and NGOs (Stoddard et al. 2019). However, questions about who distributes aid, and to whom, caused severe disagreements between governments, rebels, and international aid workers in post-tsunami Aceh and Sri Lanka (Harrowell and Özerdem 2019; Zeccola 2011; see also the case studies “Indonesia 2004: Wave of Peace?” and “Sri Lanka 2004: Wave of Violence?” in chapter 4).

In sum, the costly signal pathway assumes that armed groups have good reasons to demonstrate their strength, determination, territorial control, and/or relevance in the aftermath of a disaster. Verbal communication is often inadequate for these purposes, as “talk is cheap” and hardly credible in environments characterized by high levels of insecurity and hostility. A government is unlikely to conclude that an offensive against a supposedly weakened rebel will prove fruitless simply because the rebels claim they still have sufficient military capability, for example. The escalation of violence, by contrast, is a “costly signal” (Kydd and Walter 2006: 50). Put differently: such an escalation is usually too risky and costly to be part of a bluff, and hence more credible.

Image Cultivation

As has been discussed above in more detail, armed groups on both the government side and the rebel side receive support from various groups, including foreign governments, civilians, and local elites. Such (inter-)dependence necessitates communication between an armed group and (potentially) supporting actors, and as with the intensification of violence, restraining from violent actions can also be an effective communication strategy. This is because acting in a certain way is more credible than just making claims or announcing plans for action, particularly if increased grievances or improved opportunity structures after a disaster set incentives for conflict escalation, yet the conflict party limits its use of violence.

Armed groups might opt to de-escalate an armed conflict as a communicative action in two situations. The first one is when an armed group strongly depends on a part of the population that has been heavily affected

by the disaster. Rebel groups, for instance, often merge with the civilian population to avoid detection by government intelligence, rely on local taxes and food supplies, or recruit members from a certain constituency. But governments may aim to win the hearts and minds of the population in the course of a counterinsurgency campaign as well, and thus they rely on local support for gathering information or supplies for military troops (Polk 2007). Earthquakes, floods, storms, and droughts can have an enormous effect on the lives and livelihoods of vulnerable populations.

By restraining violence in the face of disasters, armed groups communicate several messages to the (heavily) affected groups. They show their condolence and solidarity (as seeking military gains from tragic events might be perceived as inappropriate), counter accusations of being more interested in winning the war than in supporting people (as resources used for relief work cannot be simultaneously used for military purposes), and demonstrate their support of the population by trying to establish a secure environment for relief and reconstruction. Studies finding that civil war parties are more likely to negotiate (Nemeth and Lai 2022) and conclude a cease-fire (Kreutz 2012) after major disasters support these arguments. Similarly, Kyle Beardsley and Bryan McQuinn (2009) argue that rebel groups that strongly depend on local taxes are more likely to seek peace in post-disaster contexts than rebels with external funding sources.

The second situation during which violence de-escalation as a form of communication is likely to happen is when conflict parties depend on foreign support such as military or development aid. As remarked by Reyko Huang (2016: 104), "Rebels often undertake measures, such as compliance with international humanitarian law, not as part of a coherent military strategy but to please external audiences." Governments face similar incentives. James H. Lebovic and Erik Voeten (2009), for instance, find that negative representations of a country by the United Nations Commission on Human Rights significantly reduce multilateral aid. Governments and rebels can restrain violence after disasters to cultivate an image as reliable and responsible actors.

Particularly when donors have a strong democratic and human rights record, when they have invested large amounts of money in the affected region, and/or when many of their citizens are in the areas devastated by the disaster (e.g., as aid workers), rebels and governments might want to send a strong signal about their reliability by limiting the use of violence

(Fortna et al. 2018). Even countries that are traditionally skeptical about foreign interference and Western human rights norms, like China, pushed for the government of Myanmar to set aside political disputes and accept international aid after Cyclone Nargis in 2008 (Junk 2016). Moral concerns of the international society can therefore also pressure armed groups to signal their goodwill by limiting the use of violence.

To sum up, a “reduction in conflict intensity can be . . . a central signaling device” (Ruhe 2021: 690). The higher likelihood of negotiations and cease-fires after a disaster again provides supportive evidence here (Kreutz 2012; Nemeth and Lai 2022). Regarding the civil war in Aceh, Jean-Christophe Gaillard and colleagues (Gaillard, Clavé, and Kelman 2008: 517) describe how both conflict parties were strongly dependent on local populations and especially international support. They purposefully de-escalated the conflict after the 2004 tsunami in order to cultivate a positive image and ensure sustained assistance: “Many observers agreed that resorting to military solutions to resolve the conflict in a concurrent post-disaster emergency and rehabilitation context would be politically incorrect in the eyes of the wider Indonesian population and international community” (see also the case study “Indonesia 2004: Wave of Peace?” in chapter 4).

In contrast to the other two potential de-escalation impacts of disasters, the decline in violence here is driven neither by increased solidarity nor by material constraints imposed by the disaster. Rather, at least one of the conflict parties restrains the use of violence (even if grievances increase or opportunities emerge) to send a message to one or several actors.

Summary

This chapter laid the theoretical foundation for the book. It combined the two main outcomes of interest (armed conflict escalation and de-escalation) with the three approaches to explaining the dynamics of armed conflict: motive, strategy, and communication. By doing so, I was able to differentiate six potential impacts of disasters on ongoing armed conflicts (or pathways connecting disasters to a change in armed conflict intensity). The impacts can overlap and reinforce or cancel out each other.

Armed conflicts may escalate after disasters because of increased grievances of the affected populations, because armed groups face better opportunities to wage violence (e.g., recruitment of deprived individuals, state

weakness), or because armed groups seek to send a costly signal about their continued presence, strength, and determination to relevant audiences. Alternatively, disasters can result in increased solidarity and trust, pose restraints to the mobilization and mobility of armed groups, or provide incentives for actors to cultivate a positive image by restraining from the use of violence, hence leading to a de-escalation of the conflict. Especially the communication approach and its associated pathways (costly signal and image cultivation) are innovative as research on disasters and conflict has so far focused largely on motives and strategic concerns (Brzoska 2018). This chapter represents the first theoretical formulation of the communication approach in the environmental security and climate conflict research field.

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