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Exploring the climate change–conflict–mobility nexus

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The links between climate change or climate-related environmental change with stability, security and development is a topic of growing interest and concern within the international community. It is widely acknowledged that climate-related environmental change has the potential to cause multidimensional security and development risks. In the 2009 report *Climate Change and its Possible Security Implications* (United Nations General Assembly, 2009), the United Nations (UN) Secretary-General recognized climate change as a "threat multiplier", highlighting that while climate change does not directly or inevitably cause violent conflict, its interaction with other social, political and economic factors can exacerbate drivers of conflict and fragility and have negative effects on peace, stability and security. More recently, the UN Special Representative of the Secretary-General (SRSG) for Disaster Risk Reduction, has called for accelerated action to address disaster risk in conflict and fragile contexts and the co-chairs of the Global Platform for Disaster Risk Reduction underscored the security implications of climate change and disaster and called for the recognition of the "interplay between disasters, climate change, environmental degradation and fragility".[1]

Understanding when and how climate change and disasters can increase the risk of violent conflict and alter existing conflict dynamics is important considering the disproportionate impact of climate variability and extremes on conflict-affected and fragile countries with a history of violence. It is estimated that 60 per cent of the 20 countries considered to be most vulnerable to climate change by the ND-Gain Index are affected by armed conflict (ICRC, 2020). Added to this, climate change will likely exacerbate resource scarcity, which will be most felt in countries that are economically dependent on natural resource-based sectors. Natural resource dependency is acute in conflict-affected countries, where agriculture accounts on average for 37 per cent of GDP, which is between two and four times higher than in developing contexts that are not affected by conflict or fragility (FAO, 2018). At the same time, it is important to keep in mind that climate change has to a certain degree been securitized – and at times instrumentalized – by reframing it not only as a developmental and environmental concern, but also as a foreign policy and security issue. In most documented cases, however, climate-related environmental change causes depressed development outcomes rather than overt violent conflict (Peters et al., 2020).

Against this background, this paper aims to improve the understanding of the interlinkages between climate change and conflict by providing a synthesis analysis of research on the topic. It more particularly explores four main factors identified as mechanisms through which climate change affects violent conflict, including increased migration and changing pastoral mobility patterns (van Baalen and Mobjörk, 2017). The paper then provides some conclusions drawing from the findings of existing research, as well as policy and programmatic implications for peacebuilding, community stabilization and disaster risk reduction interventions.

The paper focuses on internal conflict and internal displacement, while referring to cross-border migration and international conflict where relevant. Internal violent conflict is understood as intra-State conflicts between non-State armed groups and between non-State armed groups and the State, in more or less organized forms and with different levels of intensities and violence.

As this paper underlines, whilst climate change can contribute to exacerbating conflict, it is not a cause of conflict per se in the absence of other factors. However, with climate change as a conflict "multiplier", it is important to understand the various contextual factors that can, combined with climate change, impact on conflict affected or fragile States. This paper thus aims contributing to the policy and activist debates about climate change, conflict and migration, which is often dominated by determinism that simplistically links violent conflict and war to climate change (Salehyan, 2008).

[1] The Global Platform for Disaster Risk Reduction is a biennial multi-stakeholder forum established by the UN General Assembly to review progress, share knowledge and discuss the latest developments and trends in reducing disaster risk.

Mechanisms of how climate change can affect violent conflict

While it is widely accepted that climate change presents challenges that can aggravate both the risk and existing situations of violent conflict, the exact link and the mechanisms – when and why – of how climate change relates to violent conflict remain debated and inconclusive amongst academics and practitioners (Buhaug, 2017a, 2017b). While there often is a tendency within policy and activist circles to oversimply the links to conclude that climate change directly causes civil war and migration, some scholars have refuted that climate change increases the risk of violent conflict (Salehyan, 2008). However, their research is mostly based on quantitative studies, which do not show a statistical relationship between climate change and conflicts. Academics have criticized these studies for only relying on large-scale data and for only looking at the risk of new conflict and not at the dynamics (i.e. length or intensity) of existing conflicts as well (de Coning and Krampe, 2020; Theisen, 2017, 2018). Qualitative studies have looked more at how climate change may translate into violent conflicts and under which conditions it is most likely to do so, but looking at individual articles and arguments, the relationship remains also here inconclusive (van Baalen and Mobjörk, 2017).

To understand the mechanisms through which climate change affects violent conflicts, an extensive review, the first of such kind, of both qualitative and quantitative research on climate change and violent conflict in East Africa was conducted in 2017 and funded by the Swedish International Development Cooperation Agency (Sida). The synthesis, summarized below, is useful to bringing together the different and contradicting findings and arguments that are put forward by scholars and that circulate in the media and policy realm. Notwithstanding the above inconclusive debate, this study shows that climate change can both increase the risk of violent conflict, especially in areas that have a history of violence, and significantly alter the dynamics of existing conflicts (van Baalen and Mobjörk, 2017). A report of the Norwegian Institute of International Affairs similarly concludes that climate change can affect the onset and the dynamics of conflict, while climate change by itself is not understood as a main cause of violent conflict, but rather one among several others such as social, political or economic factors (de Coning and Krampe, 2020).[2] Other large-scale comparative analyses also show that climate-related environmental change heightens the risk of conflict in fragile and conflict-affected contexts (Hilhorst et al., 2019).

Four key explanations or mechanisms of how climate change can affect violent conflict were found in the Sida study mentioned above:

- worsening livelihood conditions;
- increased migration and changing pastoral mobility patterns;
- tactical considerations by armed groups; and
- elite exploitation of local grievances.

They are presented in more detail below. Most of the studies examined focus on violent conflicts, defined as entailing deliberate violent acts that result in bloody harm, which are low-intensity and between semi-organized, communal groups. Other relevant studies and reports are referenced in the below sections as well to further help analyse the topic and to provide examples from other regions as well.

[2] Such as endemic poverty, weak and corrupt governance structures, protracted conflicts, demographic pressures and urbanization (de Coning and Krampe, 2020: 5 and 15).

Worsening livelihood conditions

Livelihood conditions are at the centre of the climate-conflict nexus debates because of the high dependency on natural resources for livelihoods in fragile and conflict-affected countries, as referenced above, and the potential impact of climate change on the availability or quality of these natural resources, that is, freshwater, grazing lands, livestock and crops. The Sida study points to several case studies and numerous statistical studies in East Africa that demonstrate that temperature extremes that lead to livestock losses and negatively affect crops, increase the risk of violent conflict, and potentially lead to social unrest in urban settings because of fluctuations in local food prices and availability (van Baalen and Mobjörk, 2017).

First, when climate-related environmental changes interact with other social, economic and political factors, such as marginalization or unfair land distribution, the impact of climate change on the availability of scarce natural resources, such as water or land for farming and grazing may increase the risk of conflict between cattle-keepers (ibid.). For example, the frequency of livestock-related violence increases in exceptionally dry months and years in the Turkana district in Kenya, when the depletion of resources drives pastoral groups toward more intense competition over natural resources (ibid.). In Somalia, South Sudan and the Sudan, abnormally high temperatures and droughts cause herders to sell more livestock, which leads to an oversupply of low-quality animals, which depresses prices in local markets, and in turn making people more prone to livestock raiding and potentially susceptible to joining armed groups (ibid.).

Similarly, soil erosion induced by overuse of grazing lands and climate change, along large-scale illegal logging for timber smuggling, such as in the case of Afghanistan, affects pastoralists and settled cattle breeders who compete for access to pasture, which feeds into long-standing conflicts between the two groups (Brown and Blankenship, 2013).

Second, while livestock raiding or communal conflicts are less organized forms of violent conflict, worsening livelihood conditions of both cattle breeders and farmers may also cause individuals to join armed groups. An adelphi report supported by the Government of Germany shows that climate-related environmental change combined with other stressors is a contributing factor in the rise and growth of non-State armed groups (NSAGs). The negative impact on livelihoods, that is, food insecurity or water and land scarcities, makes the affected population more vulnerable to recruitment by NSAGs, who can offer alternative livelihoods (Nett and Rüttinger, 2016). A MEAC[3] report explains how in the Borno state of Nigeria, negative effects of climate change on livelihoods drives recruitment into armed groups. The same can be observed in the Lake Chad area, especially in areas that are highly dependent on subsistence farming, which are impacted by a reduction of arable land, unpredictable water availability and crop destruction from floods and storms (Caus, 2020).

Comparably, farming livelihood insecurities as a result of reduced water availability in Afghanistan drive farmers to either engage in illicit poppy production or to join NSAGs (Nett and Rüttinger, 2016). During Afghanistan's 2006–2007 drought, for example, many young men in Balkh province joined the Taliban or other NSAGs to diversify their livelihoods and/or to get paid for their services (Mena et al., 2019). NSAGs also protect farmers who cultivate opium and thereby gain more support amongst impoverished farmers (Nett and Rüttinger, 2016). Moreover, the Taliban and illicit networks are increasingly trying to use pastoralists for smuggling drugs and weapons through the country and provide them with arms (ibid.).

[3] MEAC (UNU-CPR's Managing Exits from Armed Conflict) is a multi-donor, multi-partner initiative to develop a unified, rigorous approach to examining how and why individuals exit armed conflict and evaluating the efficacy of interventions meant to support their transitions.

Intensified conflicts over natural resources and livelihoods can furthermore result in reducing the level of State authority in affected areas creating space for NSAGs to operate more easily. At times, NSAGs try to fill this gap by providing basic services to gain legitimacy and support from the local population (ibid.).

However, not all situations or conflicts will become violent, which depends largely on the local socioeconomic and political context, and local communities may withstand worsening livelihood conditions for varying periods of time (de Coning and Krampe, 2020). As pointed out above, the risk of violent conflict can increase in countries currently or previously affected by violent conflicts, however, the tipping point for when conflicts become violent or intensify depends on several factors, including the dynamics of the conflict, the level of vulnerability and response or adaptation capacity of communities to the effects of climate change, which can be largely undermined by violent conflict (van Baalen and Mobjörk, 2017). For example, in the Turkana district in Kenya where the benefits of cooperation normally outweigh the benefits of livestock raiding when resources are abundant, the relative value of cooperation decreases when there is less land, pasture and water to share (ibid.). Furthermore, while it is apparent that climate-related environmental change might intensify conflicts or facilitate recruitment, it is not possible to say based on the literature reviewed, how much these conflicts have been impacted by climate change and whether NSAGs would have seized other opportunities unrelated to climate change to recruit more combatants or supporters.

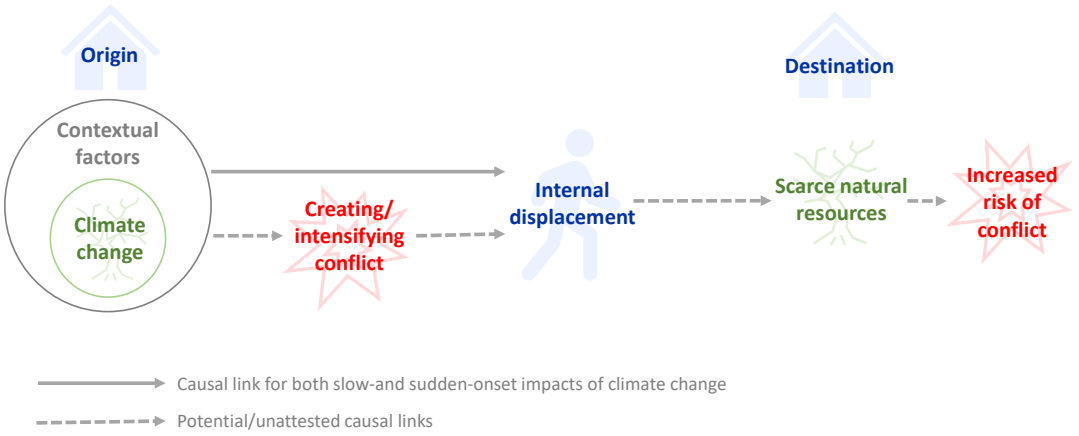
Lastly, the impact of climate change on the availability of natural resources can also create food insecurity that is felt in urban settings and potentially lead to tensions. Drought and floods related to climate change can have large impacts on local food prices and availability, which can lead to social unrest, especially where governments are unable to lessen the effects (Sida, 2018). However, social unrest in periods of high food prices relate not only to food insecurity, but to broader and complex sources of discontent, including political structures, land ownership, corruption, desire for democratic reforms, and general economic reforms. Increases in food prices, due to decreased supply caused by climate-related factors, can therefore exacerbate pre-existing problems. The price of food is perceived in the context of general increases of cost of living (Vestby et al., 2018).

Increasing migration and changing pastoral mobility patterns

Resource scarcity may push resource-dependent populations to migrate to resource-rich areas or to urban centres. People have been migrating for centuries away from resource scarce environments while with climate change and an increase in environmental degradation, migration might become a climate change adaptation strategy. Migration as a result of climate-related environmental change mostly induces short-distance migration within national borders and can be cyclical, seasonal or more permanent (Peters et al., 2020). Pastoralists may change their trekking routes in response to climate (van Baalen and Mobjörk, 2017).

Sudden-onset disasters like floods or storms can cause immediate displacement and, in many of these situations, a clear, causal link between climate change and migration can be observed (see Figure 1 below). However, not all weather-related disasters are directly related to climate change (IDMC, 2021), and in some instances, displacement due to rapid-onset disasters might not be immediate, but rather triggered several years after the event, only when in situ coping mechanisms have been exhausted (Hermans and Ide, 2019).

Figure 1. Causal links between climate change, conflict and internal displacement



However, in the case of slow-onset disasters, the decision to migrate often depends on a multitude of reasons and it is often difficult to know if climate-related environmental change has been an important driver. Drivers of displacement and migration overlap and interact, are dynamic and geographically varied (UNHCR and IOM, 2021; IDMC, 2019; Ministry of Refugees and Repatriation, 2013; OCHA, 2019). Partly due to this complexity, there is for instance little scientific evidence that convincingly shows a causal path from climate change to conflict to cross-border migration, despite claims in the media. Different possible drivers for mobility need to be considered when examining the link between climate change and cross-border migration and internal displacement (Abel et al., 2019).

In Somalia, for example, a new study by the International Organization for Migration (IOM) and the United Nations High Commissioner for Refugees (UNHCR) shows that the motivations for movement are many and include droughts, conflict, and insecurity and they are interdependent and inextricably linked (UNHCR and IOM, 2021). In Afghanistan, the study references an assessment from 2019, which shows that "56 per cent of IDP households reported a combination of active conflict, anticipated conflict, and natural disaster (slow or sudden onset) caused their displacement" (ibid.: 26). Conflict and disaster and their interactions or combined effects are mentioned as causes of displacement in the Afghanistan 2013 National Strategy on internally displaced persons, underlying the difficulties to disentangle them.

Not only are decisions to migrate multi-causal, but displacement data related to disasters are less robust than displacement data related to conflict and violence. While drawing on multiple sources, estimates from the Internal Displacement Monitoring Centre (IDMC) do not present the full picture because many governments do not collect data on internal displacement associated with disasters or do not collect them over a longer period. Nevertheless, despite the challenges, there are global estimates made on climate change related population movements. According to IDMC, there were 30.7 million new internal displacements due to disasters in 2020 alone (IDMC, 2021). Some like the World Bank even make projections of internal displacement due to slow on-set disasters for the future. The World Bank has estimated that without urgent climate action, as many as 140 million people may migrate internally across sub-Saharan Africa, South Asia, and Latin America by 2050 due to environmental factors (World Bank, 2018).

The mobility of population groups may increase the risk of violent conflict (see figure 1 above). As most of those who move in context of climate change are likely to be moving internally, the following examples involve internal movements. First, as with any internal population movement, migrants might put additional burden on the natural resources in the recipient area, which might turn into conflicts with residents over access where migrating groups and residents have a history of violent conflicts and may lack shared conflict resolution mechanisms, and where there is no

effective resource management in place. However, most migration flows do not lead to conflict and there is little empirical evidence that climate change induced migration leads to conflict in migrant receiving areas where there is no history of violence or pre-existing competition over resources (Abel et al., 2019; Salehyan, 2008).

In Burkina Faso, for example, populations displaced by land degradation and increased climate variability over the last decade has led to demographic reconfigurations, which have contributed to conflicts over land. Especially people from the central plateau have migrated internally to more developed areas of the south and southwest where irrigated agriculture and commercial investments are increasingly found or to less developed areas in the east where land is more abundantly available. In the east, for instance, residents who have traditionally allowed new arrivals to use available land are now increasingly disputing these new settlers' land use rights (USAID, 2014).

Second, climate change may influence conflict between pastoralists and between pastoralist and sedentary groups by forcing them into closer proximity. Pastoralists may end up closer to other, sometimes conflicting groups by moving their herds to areas outside their extended family's or clan area that are richer in water and pasture, inciting competition over limited resources with other pastoralists or sedentary groups. In the Sudan's Southern Kordofan region, for example, the decline in rainfall has pushed nomadic groups to move further south, bringing them into increasing conflict with farmers (van Baalen and Mobjörk, 2017). Pastoralists normally negotiate access or access is determined by customary laws, which may not be accessible along new trekking routes and grazing areas (ibid.; IDMC, 2020).

Similarly, conflict between pastoralists and farmers over transhumance is prevalent in Central Sahel. In the dry season, herders and their cattle migrate to more humid areas in the east and return to their place of origin during the rainy season. However, with the increasing scarcity of fertile arable land, many farmers have started to exploit these passing zones, blocking the corridor for the herders and their cattle. Herders who try to make their way through sometimes damage the crops of farmers leading to conflicts (Cordaid, 2020).

On climate change related cross-border movements, on the other hand, there is little evidence that international migrants have increased the risk of conflict or insecurity in destination countries. This is partially due to the fact that other factors such as political stability, economic conditions or the capacity of governments to provide services are empirically more relevant than migration (Sida, 2018).

Tactical consideration by non-State armed groups

Changes in precipitation and snow levels due to climate change can have an impact on the tactics and activity of NSAGs. In Afghanistan, for example, less winter snow in recent years has made it easier for the Taliban to wage war outside of its traditional season (Jones, 2020). In terms of tactics, NSAGs leverage fragile and resource-scarce environments by using natural resources as a weapon of war. In such environments, NSAGs can restrict access to natural resources. In southern Iraq, where clashes have increased over the control of water due to recurring droughts (Al Hasan, 2020), the Islamic State of Iraq and the Levant (ISIL) controls dams and cause water shortage or floods and cut off supplies to the Shia population (IOM, 2019).

Yet, it is not clear whether using natural resources as a weapon of war has become more common with climate change and whether it will lead to more numerous or more intensified or violent conflicts. It might become more common as climate change increases the scarcity of natural resources and as scarcer the resources become, the more power it gives to those who control them (Nett and Rüttinger, 2016). When evaluating the impact of climate change on conflict, therefore, it is important not to conflate this with the exploitation and control of natural resources by NSAGs as a tactical decision.

Exploitation of local grievances

According to the Sida study, most of East Africa's resource-related violent conflicts occur between loosely organized communal groups and lead to relatively low levels of battle-related deaths. However, local grievances or resource conflicts linked to scare resources can get exploited and manipulated by the country's elite, turning them into more organized forms of violence (Nett and Rüttinger, 2016). States play a key role in containing or aggravating violence (Salehyan, 2008). For example, when the war between northern and southern Sudan began in the early 1980s after a long, deep drought, ethnic communities had longstanding grievances and communal conflicts over land, which were instrumentalized leading to insecurity long after the end of the war and secession of South Sudan (van Baalen and Mobjörk, 2017).

Armed groups also instrumentalize tensions and grievances of competing groups. Boko Haram and other armed groups have increasingly exploited resource competition between pastoralists and farmers, building alliances with and mobilizing communities in Northwest Nigeria and elsewhere in the Sahel (Caus, 2020). In Afghanistan, the conflict between pastoralists and settled cattle breeders who compete for access to pasture as a result of soil erosion gets exploited by the Taliban who provide arms to the pastoralists and use the conflict to win land and to secure trading routes for illicit goods (Nett and Rüttinger, 2016).

NSAGs may also exploit regional inter-State tensions around the access to natural resources. Afghanistan has had repeated disputes with the Islamic Republic of Iran and Pakistan over the access to its four major rivers, which flow to Pakistan, the Islamic Republic of Iran and Turkmenistan, and which get exploited by NSAGs. NSAGs, particularly the Taliban, are increasingly making use of regional tensions over water for their own strategic interests. Climate change-related recurrent droughts and reduced river flow from earlier snow melt will likely increase pressure on these scarce water resources and regional tensions are likely to increase too (Nett and Rüttinger, 2016).

Institutional, political and policy factors

While this paper has so far discussed the links between climate-related environmental change, conflict and population movements, the impact of climate-related hazards on people can largely depend on the policies and responses of governments. First, political decisions determine the availability and the distribution of resources, which results in differentiated vulnerabilities and different impacts. Marginalized communities or regions become more vulnerable to the effects of hazards (Stein and Walch, 2017). In East Africa, resources of pastoralists are depleted not just because of more frequent and longer droughts, but also because of pastoralists' political, social and economic marginalization (van Baalen and Mobjörk, 2017). In the Sudan, for example, resource scarcity is the result of climate change as well as damaging agricultural practices, deforestation and the expansion of mechanized farming, together with other factors such as population growth (van Baalen and Mobjörk, 2017).

Food policies that give more attention and resources to agriculture rather than animal farming are one policy example that has particularly increased the risk of conflict in many regions. In Central Sahel, the expansion of arable land and cereal production has largely been achieved to the detriment of pastoralism. In Burkina Faso, in a drive to increase the food production, land previously allocated to grazing, including marginal lands and transhumance routes, has been given to farming to produce cereals and staples without adequate compensation, creating conflicts (Raineri, 2020). Non-native farmers pulled to production sites furthermore seek to bypass the traditional local authorities by appointing their own village chiefs to reinforce their land rights,

adding to the frustration of pastoralists who have lost confidence in judicial and traditional dispute settlement mechanisms. Inter-and intra-communal clashes and demands for protection by herders have been exploited by jihadist groups (ibid.).

Second, government response and preventive measures to climate-related hazards also shape the effects of climate-related disasters on different communities and conflict (Hilhorst et al. 2019). A notorious example is the 1984 Ethiopian famine, where the Government of Mengistu Haile Mariam multiplied the effects of drought and refused to allow relief into rebel-held parts of the country (de Waal, 1991). Some academics and international agencies refrain from referring to "natural" disasters because, in such cases, disasters are fundamentally a consequence of man-made socioeconomic and political conditions (Mena et al., 2019).

Climate change will increasingly challenge the ability of States to deliver services and hence decrease their legitimacy, which can undermine the trust of the population in the government. Where the government is a party to the conflict or fuels violence and conflict as a result of poor and slow responses, its incapacity to properly respond and prevent climate-related environmental impacts can further contribute to instability and violence (Nett and Rüttinger, 2016). In Afghanistan, for example, weak disaster risk management by the Central Government has contributed to eroding its legitimacy, which gets exploited by NSAGs that take over State functions to win support or legitimize actions against the government (van Baalen and Mobjörk, 2017).

In sum, evaluating the nexus between climate change, conflict and human mobility needs to factor in the interactions between humans and the changing environment as well as the positive or negative influence of institutions, the policies they create and political factors. This is important when attempting to make predictions or policy prescriptions and formulation (Salehyan, 2008).

Conclusion and policy implications

Several conclusions can be drawn from the above findings.

- Climate-related environmental change can increase the risk of violent conflict by contributing to existing tensions and alter current conflict dynamics. From the above, it follows that climate change is not expected to create new conflicts in stable contexts, but to rather incite or renew existing cleavages, turning conflicts violent or intensifying or altering existing violent conflicts. However, we do not yet know the full impact of climate-related environmental change on such dynamics, nor is it possible based on this literature review to estimate how much additional impact climate change may have on violent conflict and migration.
- Violent conflicts that involve pastoralists are of importance, as there is a clear link between climate-related environmental change and competition for water and pasture between pastoral groups and between pastoralists and sedentary groups. Weather extremes do not seem to create violent conflicts between farmers whose crops have been negatively impacted. However, farmers, as other socioeconomic groups affected by climate change, become more prone to manipulation by armed groups who offer economic alternatives or political elites. Farmers as well as herders may migrate to more resource-rich areas inhabited by rival groups and where violent conflicts can erupt over access to resources. Climate-related disasters often interlink with other causes such as violence to push people to leave their home or home area.
- Conflicts also erupt along changing trekking routes, at temporary points of high conglomeration in water and pasture-rich areas as well as along the transhumance corridors that get cultivated by farmers.

- Politics and policies are determining factors in the availability and distribution of resources and often cause conflicts over access and use. Conflicts are in many instances the result of poor decisions rather than the scarcity of resources and climate-related environmental change, although exacerbated by both.
- The impacts of climate change are temporally and spatially diverse and have different effects on different population groups. Different climate-related changes exacerbate various social, political and economic factors and each combination of factors are likely to generate its own unique dynamics (van Baalen and Mobjörk, 2017; de Coning and Krampe, 2020).

While the scholarship on the climate-conflict nexus continues to grow, the above findings and conclusions are useful to already draw some policy implications as developed below.

Implications for peacebuilding/community stabilization

Considering the role that climate-related environmental change can play in the risk and intensification of conflicts, and coupled with conflicts and violence in population movements, it follows that peacebuilding/community stabilization intervention necessarily must incorporate an analysis of the mechanisms of how climate change affects conflict risks and dynamics. Most of the current research takes the existence of climate-related environmental change as a starting point. It analyses if there is more conflict in places with environmental change but struggles to then explain the concrete interplay. A sole focus on the "whether" question without considering the highly context-specific dynamics is not very helpful in advancing a nuanced understanding necessary to design peacebuilding interventions. Much could be learned about the mechanism of how climate-related environmental change contributes to violent conflict if the conflict or tensions in conflict-affected and fragile countries are taken as the starting point. Climate-related environmental change should get layered on top of the existing conflict dynamics and analysed as a conflict multiplier. The impact of climate change can only be fully appreciated if the conflict is well understood. Based on a solid understanding of the conflict dynamics and the links between climate change, conflict and mobility, a comprehensive peacebuilding response can be designed that might include disaster risk reduction and climate adaptation activities. It will be important to not generalize or design one-size fits all solutions based on these case studies (Hermans and Ide, 2019).

Implications for Disaster Risk Reduction

As with any other outside driven intervention, the implementation of Disaster Risk Reduction (DRR) might be more challenging in conflict-affected and fragile countries because of a multitude of reasons, including poor transportation infrastructure, non-transparent governments, weak capacity of national stakeholders to implement large-scale DRR, insecurity, complex logistics, or government-imposed restrictions on access for international aid agencies. Donors may also impose restrictions on the level of direct government engagement allowed by implementing agencies. Furthermore, decisions on DRR and disaster response are inherently political and even more politicized in conflict-affected and fragile countries and hence difficult to navigate when supporting governments (Mena et al., 2019). Finally, violent conflict and political tensions can also divert attention away from disaster issues (ibid.).

It is a complex environment and many DRR actors have yet to develop specific approaches or concepts tailored to these contexts and more systematically share lessons learned (ibid.). In this view, different dimensions have to be taken into consideration when exploring the implications for DRR, including:

Taking into account the increased exposure and vulnerability to climate induced environmental change

Conflict and fragility can largely weaken the resilience and recovery of communities and undermine their anticipation, response and adaptation capacity. Conflict and violence can alter or hinder access to basic services and livelihood opportunities, such as limiting access to water or grazing land (Peters et al., 2020). Inequality and marginalization often found in the context of conflict, that is, the exclusion of certain groups to improve one's position in the conflict, and other conditions of fragility such as weak economic performance and high level of unemployment, weak infrastructure and rapid urban expansion, increase vulnerability to the effects of climate-related environmental change (World Bank, 2020). Furthermore, armed conflict often destroys infrastructure such as dams, which may intensify hazards. Armed conflict may also undermine the trust of citizens in the government, which may undermine pre-emptive disaster evacuation efforts, further putting communities at risk (Stein and Walch, 2017). Lastly, conflict and insecurity can drive displacement to areas prone to (unfamiliar) hazards (ibid.). Climate hazards have a disproportionate impact on people who are already socially and economically vulnerable – the very people who are likely to be receiving or in need of humanitarian assistance (Peters et al., 2020).

Assessing the impacts of DRR on the risk and dynamics of conflicts

External interventions, including DRR but also climate change mitigation activities, which are poorly designed and delivered can aggravate local conflict dynamics (Peters et al., 2020). For example, adaptation projects that promote irrigated agriculture, for example to produce crops that can be converted into biofuel, or the fight against deforestation and forest degradation both makes land and forest land more valuable, which can lead to evictions without adequate compensation of communities with insecure land tenure rights. Large hydropower projects have also led to forced displacement and local conflicts.

Responses to disasters that have been conceived without taking the context into consideration can also provoke unintended local tensions and sometimes violent conflicts, especially if they create new resources. Digging wells to increase the volume of available water in response to drought might harm relations between farmers and herders, as experience has shown in several Sahel regions (International Crisis Group, 2020). The same has been observed in Afghanistan where the construction of mitigation walls for flash floods has changed a river's flow and has affected users living at different points along the river, increasing inequalities between communities (Mena et al., 2019). The response to a disaster can also lead to renewed conflict, as the 2004 tsunami in Sri Lanka has shown where parts of the country felt discriminated against (Waizenegger and Hyndman, 2010).

Designing DRR interventions

Today, there is still little practical or policy guidance on how to implement DRR activities in context of conflict and fragility. The design of interventions and the way of implementing must be adapted in these contexts and will not only depend on the conditions of the receiving country but on the implementing partner's capacity and experience to navigate such complex environments. Adapted security protocols, partnerships with local organizations, capacity-building and available funds are determining factors in making DRR feasible in these contexts.

- Analysis of political and conflict context: In contexts of violent conflict and climate-related environmental change, it is important to conduct a thorough conflict and context analysis that can serve as a basis for programming and strategies. The analysis is needed to design both conflict sensitive DRR activities and DRR activities that directly contribute to peace.

- Incorporation of conflict sensitivity: Since climate-related disasters are often the result of socioeconomic and political conditions rather than the natural event and can increase conflict risks and aggravate existing conflicts, conflict sensitivity is of utmost importance. It is essential that DRR programming is designed and implemented in a conflict sensitive way that takes macrolevel factors, including the motivations of the government, as well as more local conflict dynamics into account. In context where the government is non-transparent, non-inclusive and maybe even involved in the conflict, political factors must be examined and incorporated into the intervention design; otherwise, activities risk having negative effects on already marginalized population groups, further weakening their resilience, or contribute to existing tensions or even violence. There is no blueprint approach for a conflict-sensitive DRR, but it rather will depend on the context and conflict dynamics of a given place. In some instances, DRR activities might even go beyond conflict sensitivity to contribute to peace explicitly through specific peace objectives.
- Contribution to peace outcomes: DRR activities can be designed to contribute to peace outcomes, which will have positive effects on the resilience of communities to climatic shocks and disasters. If based on conflict analysis, an intervention that supports good governance around the distribution and utilization of climate-stressed natural resources such as land or an intervention that contributes to inclusive and equitable economic opportunities and access to basic services can create conditions that reduce inequality, marginalization, as well as tensions and conflicts over access. A DRR intervention could also include conflict resolution of specific conflicts over the access to climate-stressed natural resources while paying special attention to changing conflict dynamics as a result of climate-related environmental change.

If part of a comprehensive peacebuilding or community stabilization intervention, collaborative processes around natural resource management and associated climatic risks can support the peace objectives by showing conflicting population groups the mutual benefits of collaboration over the use of violence. Since the management of disaster risks requires working closely with civil society organizations and community groups to develop risk mitigation capacities, it can also be an opportunity for the government to collaborate with different population groups that might be in conflict with the State or which each other, positively contributing to (re-)establishing the social contract between the government and communities who have historically been marginalized and whose marginalization has been cause for frustration and conflict. Similarly, collaboration around post-disaster recovery and reconstruction can be used to bring different community groups together. Such collaboration can strengthen horizontal as well as vertical trust, which in turn can support peacebuilding activities under way. It must be underlined that collaboration related to disaster risk management or in the post-disaster space alone will not solve pre-existing conflicts (Peters et al., 2020).

References

Abel, G.J., M. Brottrager, J. Crespo Cuaresma and R. Muttarak

2019 Climate, conflict and forced migration. *Global Environmental Change*. 54:239–249.

Al Hasan, S.

2020 Drought ignites tribal conflicts in Southern Iraq. Planetary Security Initiative, 17 August.

Brown, O. and E. Blankenship

2013 Natural resource management and peacebuilding in Afghanistan. United Nations Country Team in Afghanistan. United Nations Environment Programme (UNEP), May.

Buhaug, H.

2017a Welcome to the Climate & Conflict blog. Climate & Conflict blog. Peace Research Institute Oslo (PRIO), 1 November.

2017b Climate, peace and security. Climate & Conflict blog. Peace Research Institute Oslo (PRIO), 4 November.

Caus, J.

2020 *Climate-driven recruitment into armed groups in Nigeria*. Managing Exits from Armed Conflict (MEAC) Findings Report 1. United Nations University, New York.

Cordaid

2020 Saving lives and reducing conflict in the Sahel region. Cordaid, 13 November.

de Coning, C. and F. Krampe

2020 *Multilateral cooperation in the area of climate-related security and development risks in Africa*. Background Paper for UN75 Sub-regional Meeting on Multateral Cooperation to Address Climate Related Security and Development Risks in Africa 3-4 March 2020, Dakar, Senegal. Norwegian Institute of International Affairs (NUPI), NUPI Report 4/2020.

de Waal, A.

1991 *Evil Days: 30 years of war and famine in Ethiopia*. Human Rights Watch, New York, September.

Food and Agriculture Organization of the United Nations (FAO)

2018 *The State of Food and Agriculture 2018: Migration, Agriculture and Rural Development*. FAO, Rome.

Hermans, K. and T. Ide

2019 Advancing research on climate change, conflict and migration. *Die Erde Journal of the Geographical Society of Berlin*, 150(1):40–44.

Hilhorst, D., R. Mena, R. van Voorst, I. Desportes and S. Melis

2019 Disaster risk governance and humanitarian aid in different conflict scenarios. International Institute of Social Studies, Erasmus University Rotterdam.

International Committee of the Red Cross (ICRC)
2020 *When Rain Turns to Dust: Understanding and Responding to the Combined Impact of Armed Conflicts and the Climate and Environment Crisis on People's Lives*. International committee of the Red Cross, Geneva, 7 July.

International Crisis Group
2020 The Central Sahel: scene of new climate wars? Crisis Group Africa briefing No 154. Dakar/Niamey/Brussels, 24 April.

International Displacement Monitoring Centre (IDMC)
2019 *Global Report on Internal Displacement 2019*. IDMC, Geneva.
2020 Beyond drought: Adding life to the numbers. IDMC, 11 June.
2021 *Global Report on Internal Displacement 2021*. Geneva.

International Organization for Migration (IOM)
2019 *Migration and Water in the Middle East and North Africa*. IOM, February.

Jones, S.
2020 In Afghanistan, climate change complicates future prospects for peace. *National Geographic*, 3 February.

Mena, R., D. Hilhorst and K. Peters
2019 Disaster risk reduction and protracted violent conflict: The case of Afghanistan. Overseas Development Institute (ODI), September.

Ministry of Refugees and Repatriation, Government of the Islamic Republic of Afghanistan
2013 National Policy on Internally Displaced Persons. The Government of the Islamic Republic of Afghanistan. 25 November.

Nett, K. and L. Rüttinger
2016 *Insurgency, terrorism and organised crime in a warming climate: analysing the links between climate change and non-State armed groups*. Climate Diplomacy report. adelphi, Berlin, October.

United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
2019 *Humanitarian Needs Overview: Afghanistan*. Humanitarian Programme Cycle 2020. Humanitarian Country Team, December.

Peters, K., M. Dupar, S. Opitz-Stapleton, E. Lovell, M. Budimir, S. Brown and Y. Cao
2020 Climate change, conflict and fragility: An evidence review and recommendations for research and action. Overseas Development Institute, June.

Raineri, L.
2020 Sahel climate conflicts? When (fighting) climate change fuels terrorism. European Union Institute for Security Studies, Conflict Series Brief. Publications Office of the European Union, Luxembourg, November.

Salehyan, I.
2008 From climate change to conflict? No consensus yet. *Journal of Peace Research*. 45(3):315–326.

Sida
2018 *The Relationship between Climate Change and Violent Conflict*. Green Tool Box/Peace and Security Tool Box: Working Paper, 2017.

Stein, S. and C. Walch
2017 The Sendai Framework for Disaster Risk Reduction as a tool for conflict prevention. Conflict Prevention and Peace Forum (CPPF). July.

Theisen, O.M.
2017 Climate change and violence: Insights from political science. *Current Climate Change Reports*. 3:210–221.
2018 Climate change and violence: The case for mechanisms. Climate & Conflict blog. Peace Research Institute Oslo (PRIO), 17 August.

United Nations General Assembly
2009 *Climate Change and its Possible Security Implications. Report of the Secretary-General* (A/64/350). United Nations, New York.

United Nations High Commissioner for Refugees (UNHCR) and International Organization for Migration (IOM)
2021 *Bridging the Divide in Approaches to Conflict and Disaster Displacement: Norms, Institutions and Coordination in Afghanistan, Colombia, the Niger, the Philippines and Somalia*. UNHCR and IOM.

United States Agency for International Development (USAID)
2014 Climate change and conflict in the Sahel: A policy brief on findings from Niger and Burkina Faso. USAID.

van Baalen, S. and M. Mobjörk
2017 Climate change and violent conflict in East Africa: integrating qualitative and quantitative research to probe the mechanisms. *International Studies Review*, 20(4):547–575.

Vestby, J., I. Rudolfsen and H. Buhaug
2018 Does hunger cause conflict? Climate & Conflict blog. Peace Research Institute Oslo (PRIO), 18 May.

Waizenegger, A. and J. Hyndman
2010 Two solitudes: Post-tsunami and post-conflict Aceh. *Disasters*, 34(3):787–808.

World Bank
2018 *Groundswell: Preparing for Internal Climate Migration*. World Bank, Washington, DC, 19 March.
2020 *World Bank Group Strategy for Fragility, Conflict, and Violence 2020–2025*. World Bank Group.

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