GLOBAL TRENDS ANALYSIS

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Climate Change, Violent Conflict and Environmental Peacebuilding: Understanding the Interlinkages

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INTRODUCTION

Climate change has severe impacts in almost all parts of the world, also affecting human security and economic stability. More and more policy-makers are voicing their concerns that climate change will make violent conflict and political instability more likely and thus impact national and international security. In fact, climate change and an inadequate climate policy response can heighten the risks of violent conflict by increasing resource competition, recruitment opportunities for armed groups, state weakness and migration. However, climate change is never the only driver of violent conflicts.

At the same time, a range of environmental peacebuilding interventions is available to address these climate-related conflict risks. Since environmental peacebuilding is based on the assumption that shared environmental challenges can lead to cooperation between social groups, it focuses on how the joint management of natural resources and environmental problems can support peace. In order to achieve this, it addresses five core mechanisms underlying the climate-conflict link and thus aims to facilitate climate-resilient peace.

FIGURE 1

SOCIAL IMPACTS OF CLIMATE CHANGE

Source: Author

1. CLIMATE CHANGE AND ITS SOCIETAL IMPACTS

In the past decades, humanity has been transforming the global environment at a speed and on a scale unprecedented in planetary history. Recognising that for the first time ever, humans are the dominant driver of changes in the Earth system (including the atmosphere and the global water cycle), scholars have proposed that we now live in a new geological epoch: the Anthropocene (see box on p.7). Since the end of World War II, more than a quarter of all tropical forests have been destroyed by human activities, while ocean acidification and species extinction are proceeding at concerning rates (Steffen et al. 2015).

One of the most worrying trends in the Anthropocene is the accumulation of greenhouse gases such as carbon dioxide (CO_2) and methane in the atmosphere, which cause an increase in the global average temperature. The current concentration of CO_2 in the atmosphere is higher than any time in the past million years. The consequences of this are devastating: Since the late 18th century, the average global temperature has already increased by 1.1°C. By 2100, a rise of 2.7°C is most likely, although extreme scenarios predict up to 6°C of warming. As evaporation increases with temperature and warm air can hold more water, rainfall patterns will become less predictable, resulting in more droughts and floods. Heatwaves will become more common and more intense. The melting of glaciers and polar caps and the thermal expansion of water will result in a sea level rise of at least 32 cm (and up to one metre) by 2100, making coastal areas less habitable. Extreme storm events like hurricanes and typhoons may also occur more frequently in a warmer world (IPCC 2021).

Such climatic changes have severe consequences for human societies. If climate-related disasters like storms, droughts and floods increase in frequency and intensity, they will cost more human lives, destroy infrastructure and cause setbacks to development. Higher temperatures and less predictable rainfall undermine agricultural production, resulting in food insecurity. Heatwaves and droughts increase water needs yet decrease water availability for households and businesses. The consequences for the economy can be grave, with a recent study estimating that climate change could cut the global economy by up to 10% by 2050 (Swiss Re Institute 2021). Already marginalised groups – including the poor, ethnic minorities and women – are often most vulnerable to climate change. The same goes for people working in the agricultural sector and for those living in highly exposed areas like drylands or coastal cities.

Beyond the economic and human security impacts, many policy-makers have expressed grave concerns about the national and international security implications of climate change. Indeed, as discussed in further detail in the next section, climate change increases violent conflict risks via five causal mechanisms, namely by intensifying resource competition, facilitating recruitment by armed groups, worsening state weakness, triggering migration flows, and leading to confrontational mitigation and adaptation policies.

However, social groups can also join forces in the face of shared environmental challenges, thereby intensifying cooperation rather than conflict. Joint efforts to manage the Indus River, for instance, survived three wars between India and Pakistan. Several pastoralist groups in Africa and the Middle East have long-established mechanisms to pause hostilities and work together in the face of severe droughts. Likewise, non-governmental organisations (NGOs) like EcoPeace are facilitating cross-border water cooperation between Israelis, Jordanians and Palestinians as the region gets warmer and drier.

THE "ANTHROPOCENE" – A NEW ERA IN EARTH HISTORY?

About twenty years ago, Nobel Laureate Paul Crutzen and Eugene Stoermer suggested that we now live in a new geological epoch, the Anthropocene, marking the end of the previous epoch known as the Holocene (Crutzen/Stoermer 2000). The defining characteristic of the Anthropocene is that for the first time in the planet's history, a life form (humanity) is the driving force of changes in the Earth system (including the atmosphere, the water cycle and the composition of soils). The term is widely popular, but still contested and not yet accepted formally as a new geological epoch. There is also no agreement on precisely when this presumably new era in Earth history began, but most scholars favour either the industrial revolution in the late 18th century or the period of rapid global socio-economic development after World War II.

In the remainder, I will first address the climate-conflict link before outlining four environmental peacebuilding strategies: improving the environmental situation, building trust and understanding, creating interdependence, and establishing institutions that stabilise peacebuilding efforts. I will then discuss to what extent and how these strategies address the causal mechanisms connecting climate change to violent conflict and which policy recommendations would follow from this approach.

2. THE CLIMATE-CONFLICT LINK

I define conflict as a manifest clash of interests between two or more organised social groups, where at least one group articulates its interests through practical actions. A conflict turns violent if such actions involve the direct use of physical force. Organised groups range from gangs and protest movements to armed groups and governments. Given that interstate wars have been rather rare since World War II and have not been fought over climate-related issues yet, we will focus on violent conflicts within states. Examples of such conflicts are civil wars, community violence and riots by social movements.

2.1 DOES CLIMATE CHANGE AFFECT VIOLENT CONFLICT RISKS?

When the research on environmental change started to focus on the impacts of climate change in the mid-2000s, a link between climate change and conflict was highly contested. Fifteen years later, however, an increasing number of studies find that higher temperatures, precipitation extremes and disasters increase the likelihood of violent conflict onset and incidence. While some sceptical voices remain (Siddiqi 2022), a majority of studies and scholars now agree that climate change is a threat multiplier which significantly affects the risk of violent conflict (for overviews, see: Mach et al. 2019; von Uexkull/ Buhaug 2021).

This conclusion comes with four qualifications. First, compared to other factors (e.g. a history of violence, dysfunctional democratic systems), climate change is rarely the most important driver of violent conflicts. Second, climate-related factors are more likely to shape the risk of small-scale clashes than the risk of large-scale conflicts. While the impact of the 2007-2008 drought on the Syrian civil war is still deeply contested, riots related to disaster management or food and water insecurity can be clearly identified (Koren et al. 2021). Third, climate change only has an impact on conflict risks in certain contexts. These contexts are usually characterised by a high pre-existing conflict risk (e.g. due to ethnic discrimination or a history of violence) and a very limited ability to cope with the impacts of climate change (e.g. due to poverty and a strong dependence on agriculture). Fourth, instead of being the sole cause of violent conflict, climate change mainly increases the risk of violent conflict onset and incidence. Findings on the impact of climate change on violent conflict intensity are still mixed and inconclusive.

It should be noted that these insights are derived from studies of past temperature or precipitation extremes and climate-related disasters. If extreme weather events become more intense or widespread in the future, they might overstretch the adaptive capacities of societies that were previously able to cope with the impacts of climate change. Examples are sea level rise making several densely populated coastal zones uninhabitable due to flood risks, or a severe reduction of international food aid and food trade as severe droughts strike several major producer regions simultaneously (so far, food crises in one disaster-affected region could be dealt with by bringing in foods from other regions). In such scenarios, confrontational and violent responses to climate change are more likely. However, it is also important to consider the possibility that with better technologies and improved knowledge, future societies may have better abilities to cope with climatic extremes.

2.2 HOW DOES CLIMATE CHANGE AFFECT CONFLICT RISKS?

The previous section has established a conditional and minor, yet clearly discernible impact of climate change on violent conflict onset and incidence. In order to formulate policy advice on this climate-conflict nexus, additional knowledge of the causal chains connecting climatic factors to violent conflict risks is required. This section discusses six relevant climate-conflict mechanisms prevalent in the theoretical and empirical literature. I will detail four of them in section 3 (see also figure 3). In practice, these mechanisms may be intertwined and mutually reinforcing.

First, the aggression mechanism is well-documented in the psychological literature. Several studies conclude that humans feel more uncomfortable when experiencing higher-than-normal temperatures and hence behave more aggressively. Xu et al. (2020), for instance, report higher homicide rates in Chicago and New York after hot weather periods. This mechanism is less rel-

evant for violent conflict between social groups because heat mostly drives individual aggression. Theoretically, the latter might have a triggering effect (e.g. when a police shooting sparks a riot) but such a link has yet to be proven empirically and is unlikely in reality.

Second, back in the 1990s, researchers discussed how resource scarcity can trigger intergroup competition and violence (Homer-Dixon 1999). Particularly critical in this context are situations of relative deprivation, i.e. situations where one group perceives that it is worse off than it deserves (when compared to other groups). If such perceptions overlap with existing grievances or inequalities, violence might erupt. Climate change can result in a scarcity of renewable resources, for instance if land is lost due to sea level rise, water becomes scarce during a drought, or heatwaves result in soil erosion and higher demand for water. Land scarcity and water insecurity, in turn, are associated with riots and communal violence (Koren et al. 2021). Likewise, floods and droughts can destroy harvests, reducing the food supply and incomes of people working in the agricultural economy. The resulting high prices and food insecurity can spark political unrest and food riots, particularly in the Global South, where people tend to spend a higher proportion of their available financial resources on food (Heslin 2020).

Third, the effects of climate change can facilitate recruitment efforts by armed groups, including community militias, rebel groups, warlords and states' armed forces. On the one hand, climate change can intensify grievances, for instance about high food prices, water rationing or insufficient disaster responses. If droughts devastate agricultural economies, if coastal floods affect economic centres or if storms destroy key infrastructure, the national economy may decline, resulting in unemployment and poverty. Particularly if the resulting grievances are directed against the state or other social groups, they can be utilised by violent groups to mobilise their supporters.

On the other hand, the effects of climate change can reduce the opportunity costs of joining an armed group. Participating in collective violence is often risky as members of armed groups can be killed or captured. Individuals with secure livelihoods are therefore unlikely to join these groups (unless they are highly aggrieved). The picture changes, however, if the economy is devastated by a storm or crops are destroyed by drought. In such situations, individuals facing high livelihood insecurity might be desperate enough to join an armed group to earn some money despite the associated risks (Barnett/Adger 2007).

CLIMATE CHANGE AND CONFLICT IN EAST AFRICA

The drylands of southern Ethiopia, northern Kenya, South Sudan and northern Uganda are populated mainly by pastoralist groups. These groups secure their livelihoods by raising, using and selling livestock, such as cattle and goats (and the associated products). They have a home area usually affiliated with their ethnicity (e.g. Karamojong, Pokot, Turkana). However, during dry seasons, some members of the group, usually men, move around with the herds in search of grazing areas and water. This enables them to survive in climatic conditions too dry for conventional agriculture. Pastoralist groups usually have mutual agreements with other pastoralists or farmers about migration routes for herds and the sharing of land and water resources. However, there is also intense intergroup competition over land and water rights and political influence, as well as friction caused by thefts of livestock (cattle raiding).

Over the past few years, rainfall patterns in East Africa have become more erratic, with intense downpours followed by long periods of drought. Many scholars attribute this trend to climate change and predict that it will worsen in the future.

Longer and more intense droughts heighten three forms of conflict in the region. First, pastoralist competition over the remaining water sources and grassland intensifies. If they have lost a substantial part of their herds during a drought, groups occasionally try to cover their losses by raiding cattle from rival groups. Second, with more intense droughts, pastoralists have to migrate longer distances to find fodder and water. This makes them susceptible to attacks by ethnic rivals and more likely to enter the territory of groups with which they have no sharing agreements (as they have historically not moved to these areas). Third, pastoralist groups are increasingly moving south, where rainfall is more abundant, bringing them into conflict with conservation efforts and farmers already occupying the land. It is also possible that a decline of the pastoralist economy is driving poor and disillusioned young men into the arms of violent groups like al-Shabaab or (in West Africa) Boko Haram (see Schilling/Opiyo/Scheffran 2012; Hudson/Matfess 2017).

Empirical studies confirm that former combatants with secure agricultural livelihoods are less likely to take up arms again in order to generate income (Blattman/Annan 2016).

State weakness is the fourth mechanism potentially connecting climate change to violent conflict. States that cannot control their territory, have a weak or corrupt administration, cannot sustain a strong military or are illegitimate in the eyes of their citizens are more likely to be violently challenged by armed groups. Such states are also less able to quell community violence and moderate between hostile groups. An insurgency movement in Germany or Canada is far more likely to be quickly identified and dissolved by the state than a rebel group in Somalia or Iraq.

Climate change amplifies state weakness in a number of ways. To start with, climate-related disasters like droughts, storms and floods disrupt the economy (see previous mechanism), thus reducing the tax base. In such situations, poor states often face a dilemma: They can re-direct their overstretched resources (like money or troops) to the disaster-affected areas. This leaves the state less able to provide services (e.g. welfare payments may be cut due to disaster-related spending) or quell rebellion in other parts of its territory (as the military is busy with the disaster response). Alternatively, the state might avoid these effects by not prioritising the disaster-ridden area, but this will inevitably reduce its legitimacy and credibility among communities affected by the disaster. Such disaster-induced deprivation might also result in resource competition (mechanism 2) and additional recruitment opportunities for armed groups (mechanism 3).

Fifth, images of large-scale international refugee movements allegedly caused by climate change frequently appear in news media and public debates. These claims are certainly exaggerated given that extreme climatic events have had a very weak effect on international migration so far (Cottier/Salehyan 2021). Climate change can even produce trapped populations if households' income or assets have been reduced to such an extent that long-distance migration (which is usually quite expensive) is no longer affordable. However, climate change can facilitate short- to medium-distance migration by those fleeing a disaster or seeking to diversify household income, for example. The latter situation occurs, for instance, if farm income is reduced due to poor rainfall, so one (usually male) member of the household moves to a nearby city, takes on paid work and sends some of the income back home (Piguet 2022).

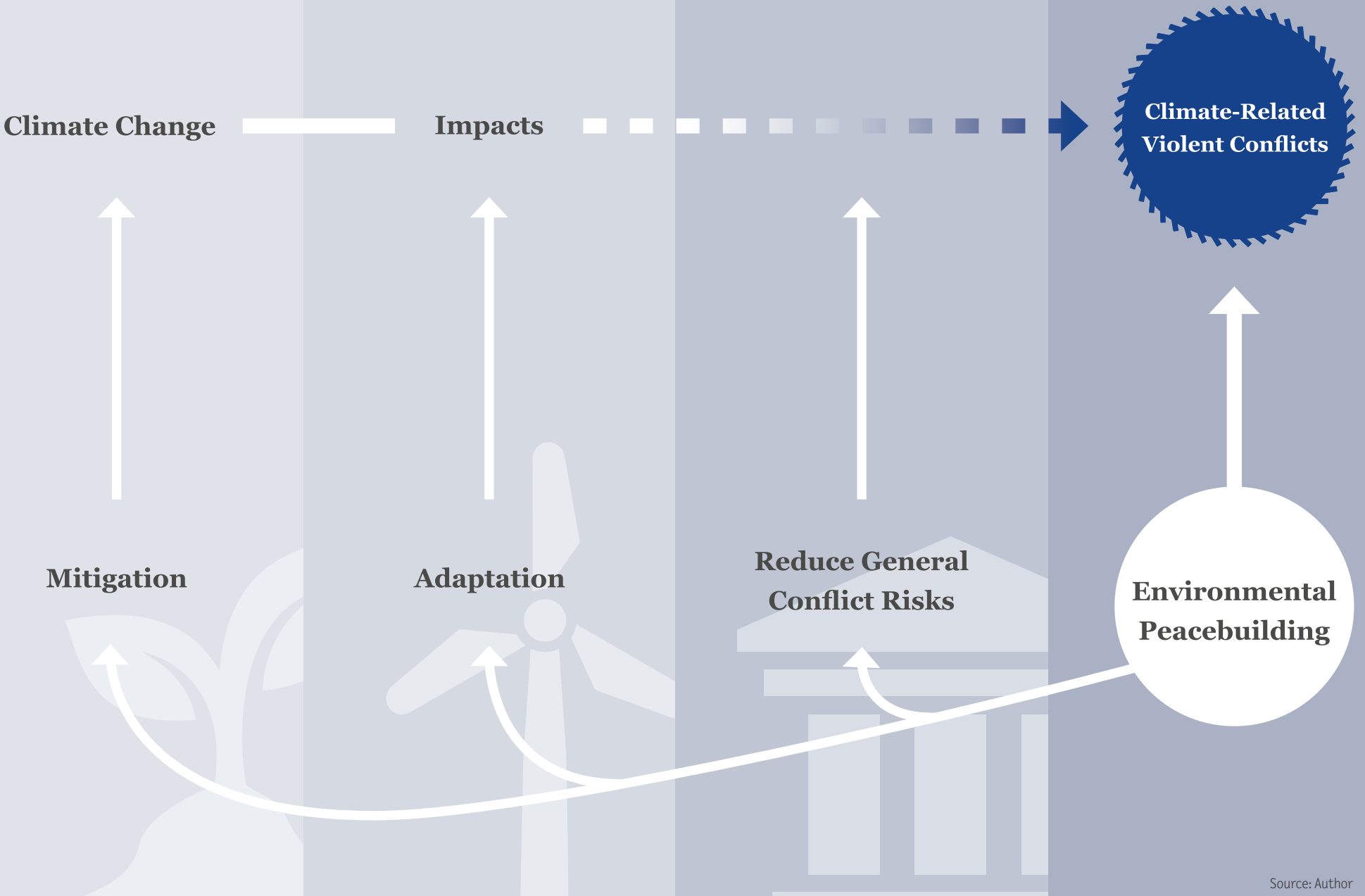
Researchers have long found that refugee flows can be associated with transnational networks of aggrieved individuals, former and active combatants, violence-prone ideologies and the arms trade. However, fishers who resettle due to rising sea levels or farmers fleeing from a drought usually do not have access to weapons, links to armed groups or war-related grievances. This makes them unlikely to "spread" violent conflict. That said, climate-related migration can still fuel grievances within the host population (which now has to share resources, services and jobs with the newcomers) and/or among migrants (who may feel abandoned by the state and discriminated against by the hosts). Evidence for this is mixed. Koubi et al. (2021) find that migrants fleeing disasters are more likely to participate in social movements, while Petrova (2021) argues that areas receiving migrants after disasters do not experience more protests. It is also possible that climate migrants struggle to make ends meet and their opportunity costs of joining armed groups (e.g. criminal networks in urban slums) are therefore lower. While such a link is plausible, research on climate-related immigration and recruitment is limited at present.

Sixth, and finally, violent conflict risks can be increased not only by the impacts of climate change but also by actions to mitigate and adapt to climate change. Seriously addressing climate change requires a drastic reduction of fossil fuel use. This could deprive oil-exporting states of their capabilities to buy off or suppress dissent (which is not a bad outcome from a democratic point of view but may result in political unrest). If people are resettled from coastal areas due to sea level rise and higher flood risks without proper compensation and the agreement of the migrating and receiving populations, major grievances against the state or between the established population and the newcomers may result.

Likewise, many climate change mitigation and adaptation efforts require large amounts of land. Examples are the conservation of forests (e.g. under the REDD+ mechanism of the Framework Convention on Climate Change for reducing emissions from deforestation and forest degradation), the establishment of seawalls and buffer zones along flood-prone rivers and coasts, and renewable energy schemes (e.g. large solar power plants, soy fields for biofuel production). As a consequence, local populations that have used (and cared for) this land for generations face limits on access or outright eviction, particularly when they hold no formal land titles (Gilmore/Buhaug 2021). This has grave implications in terms of human insecurity and loss of livelihoods

FIGURE 2

HOW TO REDUCE CLIMATE-RELATED CONFLICT-RISKS



Source: Author

but can also fuel violent conflicts due to the related grievances and recruitment opportunities. Companies and state institutions also sometimes use violence against resistant local populations (e.g. to evict them from land or prevent them from going to court) in order to enforce mitigation and adaptation projects (Middeldorp/LeBillon 2019).

In sum, there is considerable evidence that climate change increases the risk of violent conflict onset and incidence by fuelling resource scarcity, opening up recruitment opportunities, weakening state institutions, and triggering controversial mitigation and adaptation measures. Evidence is mixed for the migration mechanism and weak for a heat-aggression-collective violence nexus. Climate change is just one of several conflict drivers, such as inequality, deficient democratic institutions and weak economies, with which it interacts.

2.3 REDUCING CLIMATE-RELATED CONFLICT RISKS

What are the principal entry points for reducing or even preventing the climate-related conflict risks discussed in the two previous sub-sections?

The most straightforward options would be climate change mitigation, i.e. the reduction of the greenhouse gas emissions that cause climate change in the first place. Strategies here include, but are not limited to, ambitious renewable energy programmes, an end to fossil fuel subsidies, high taxation of fossil fuels, forest and wetland conservation schemes, and changes to consumption patterns. Such strategies would need to be implemented in a conflict-sensitive way and would require public participation as well as compensation schemes.

Adaptation is the second entry point and involves addressing the adverse impacts of climate change that cannot be mitigated. Examples are higher dikes, storm-resistant buildings, widespread insurance schemes against agricultural losses, and subsidies for water conservation measures. As with mitigation measures, climate change adaptation needs to be conflict-sensitive. The relocation of groups from coastal areas and small islands, for instance, may encounter strong opposition from the public.

As climate change is never the only driver of violent conflicts and tends to multiply pre-existing conflict risks, the climate-conflict links can also be addressed by reducing other drivers of violent conflict. Countries with strong economies, inclusive democratic systems, secure livelihoods and little systematic discrimination like Norway or Switzerland are unlikely to see more violence due to climate change, simply because they are unlikely to experience violent conflicts at all.

All these three options would have beneficial effects beyond the climate-conflict nexus. However, they are also rather general and have been proven hard to implement effectively. The next section therefore presents environmental peacebuilding as a more specific intervention that can address climate change and conflict risks simultaneously at various levels.

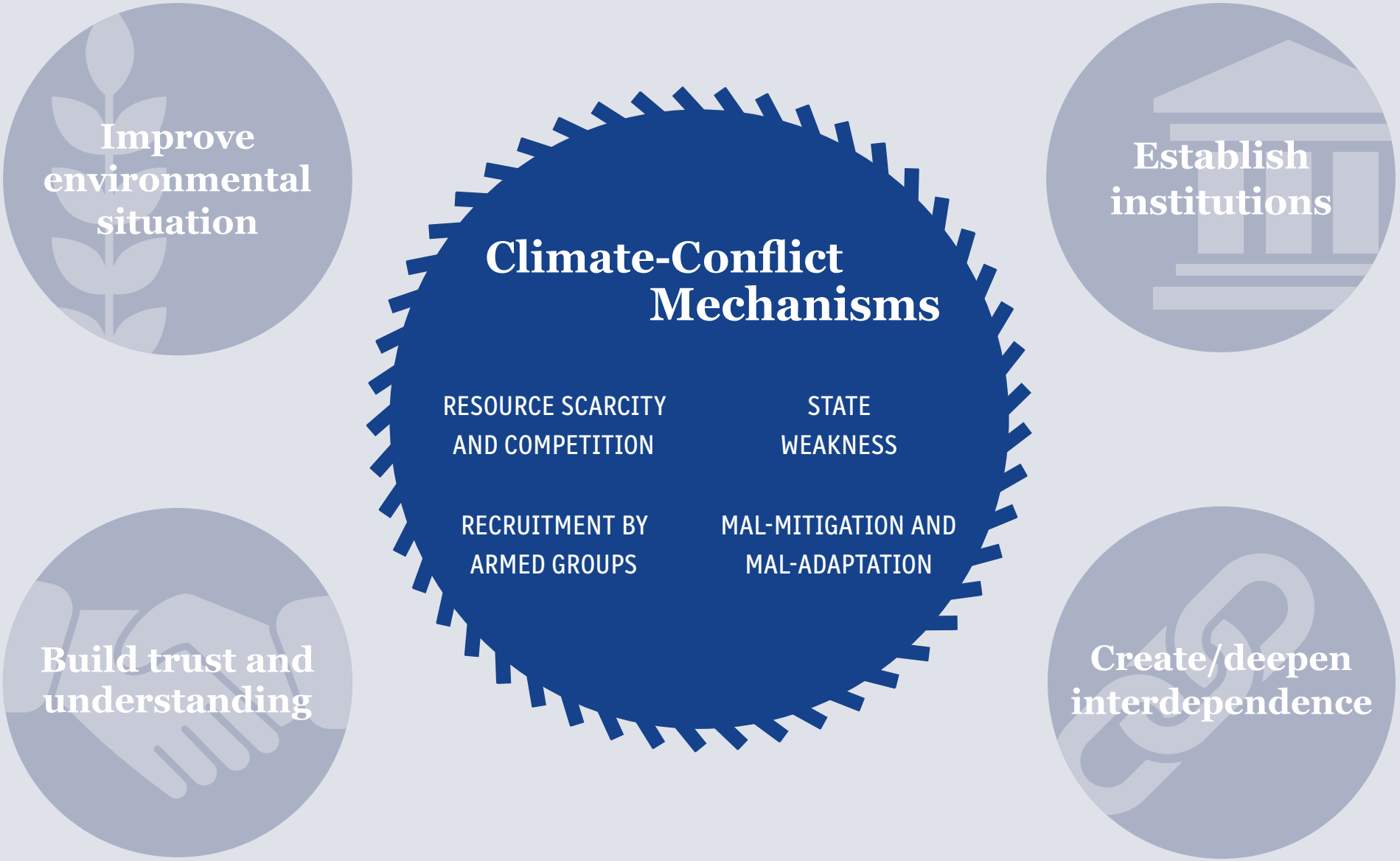
3. CLIMATE CHANGE, COOPERATION AND ENVIRONMENTAL PEACEBUILDING

Critics have long argued that the debate around climate change and conflict is too unidimensional as it only focuses on the question of whether or not climate change increases conflict risks. This can have at least three adverse effects. First, it can stigmatise regions vulnerable to climate change and at risk of violent conflict as naturally violent and unable to resolve the associated problems. Second, it may pave the way for policies that do not address and even reinforce the underlying problems, for instance by investing in military border protection measures (which are often CO2-intensive) to deal with “climate refugees” rather than in climate change mitigation. Between 2013 and 2018, for instance, the seven countries responsible for almost 50% of all global greenhouse gas emissions spent over US$ 33bn on border protection, but only US$ 14.4bn on climate finance (Miller et al. 2021). Third, debates on climate change and conflict often ignore the potential of peaceful and cooperative responses to environmental challenges (Barnett 2019).

Environmental peacebuilding addresses this shortcoming by focusing on how the joint management of natural resources and environmental problems can support peace. Broadly speaking, environmental peacebuilding is based on the assumption that shared environmental challenges can lead to cooperation between social groups. As a result, such cooperation can foster the absence of violent conflict (negative peace) as well as sustainable livelihoods and empathic relations between different groups/states (positive peace). Specifically, environmental cooperation can contribute to peace and therefore address climate-conflict links in four ways (Ide 2019):

FIGURE 3

ENVIRONMENTAL PEACEBUILDING STRATEGIES
ADDRESSING CLIMATE-CONFLICT MECHANISMS



Source: Author

First, environmental cooperation can improve the local environmental situation and contribute to fair and sustainable management of natural resources like water or land. This, in turn, impacts four of the climate-conflict links discussed in the previous section: Inclusive and sustainable resource management avoids resource scarcity and competition, secures livelihoods and hence complicates recruitment into armed groups, strengthens the state by generating legitimacy and revenues, and makes contention over mitigation and adaptation projects less likely. In the Democratic Republic of the Congo and Yemen, for instance, informal water user associations between competing groups regulate over-extraction of water, manage disputes, and hence build stronger local economies (Burt/Keiru 2011; Taher et al. 2012). Likewise, small-scale hydropower projects established in consensus with local communities generate renewable energy and improve the livelihoods and economies of the surrounding communities by providing reliable electricity (Krampe 2016).

Second, positive-sum cooperation between different groups can help to build a climate of trust and mutual understanding. In line with this, the disaster diplomacy approach argues that disasters can produce solidarity with the affected groups, opportunities to support each other, and hence entry points for diplomacy. Trust-building and diplomacy, in turn, address all five mechanisms connecting climate change to conflict (see previous section). Groups that trust each other are less likely to compete over resources or to engage in violence with each other in general. Israelis and Palestinian involved in water cooperation, for instance, display more positive out-group attitudes than the wider population (Ide 2017). If the state cooperates with local communities to manage land or to implement adaptation measures, this also enhances state legitimacy, thereby tackling grievances that facilitate recruitment by armed groups and strengthening state institutions. And in civil war-torn Colombia, some host and refugee communities have built trust by establishing green spaces in urban areas and by rehabilitating forests (Nail 2018).

The third way in which environmental peacebuilding can address climate-conflict links is the spill-over of environmental cooperation to other areas, which deepens interdependence between groups. If states cooperate over dams, for instance, it also makes sense to extend cooperation to related areas, such as hydropower, flood disasters and river pollution. According to liberal peace theory, such interdependence makes armed conflict more costly and hence less likely. However, there is only weak evidence at present that environmental cooperation reduces the risk of intrastate violent conflict by facilitating interdependence between the conflict parties.

Fourth, sustained environmental cooperation requires the establishment of formal and informal institutions. Examples are state boards to oversee hydropower projects, regional water user associations, councils of elders that are activated during droughts, and women's associations that deliver inter-village water projects. Institutions such as these address three of the climate-conflict mechanisms discussed above: They can manage resource scarcity and competition, they can provide secure livelihoods and hence complicate recruitment by armed groups, and they can ensure that mitigation and adaptation projects are conducted in a conflict-sensitive way. In some areas of Ethiopia, for instance, customary institutions facilitate mutually beneficial land and cattle sharing during droughts, improve the socio-economic situation of the households involved, and serve as lines of communication during conflicts (Bogale/Korf 2007). Acknowledging and facilitating the role of indigenous institutions in managing forests can also support the livelihoods of the communities concerned (as they receive compensation payments and/or have continued access to the forest). This also avoids conflicts over "fortress conservation" efforts, i.e. the exclusive, top-down declaration of conservation areas with no consideration of the local situation (Duffy 2016).

Overall, a plethora of evidence suggests that even though environmental peacebuilding does not always occur or work, it has a significant and positive impact on reducing violent conflict risks in many cases. Environmental peacebuilding can weaken or even mitigate all five mechanisms connecting climate change to violent conflict.

There are three caveats to this finding, however: (1) Environmental peacebuilding only works in "easy" contexts where there is broad consensus on the causes of and necessity to address environmental problems, while low levels of tensions and pre-existing social ties can catalyse initial environmental cooperation, and external support (such as money or expertise) is available to the cooperating parties. The involvement of all relevant actors is usually required for successful environmental peacebuilding as well. (2) Environmental peacebuilding is much more successful in facilitating peace as the absence of violent conflict and as the realisation of sustainable livelihoods and human security. In societies with deep underlying tensions and

ENVIRONMENTAL PEACEBUILDING IN THE MIDDLE EAST

Water is a crucial resource for the growing populations in the largely dry Middle East. Climate scientists predict that the Eastern Mediterranean region will become significantly warmer and drier over the coming decades – a trend that is already visible now. Industrial pollution and the intrusion of salty seawater into groundwater reservoirs due to sea level rise exacerbate the situation. At the same time, water resources have long been a source of conflict (but not war) between competing groups, for instance between Egypt and Ethiopia over the Nile and between Israel and Syria over the Jordan River.

In Israel and Palestine, several civil society groups try to utilise the common interest in shared water resources and environmental challenges to build peace between the longstanding rivals. The NGO EcoPeace Middle East, for instance, facilitates cooperation between Israeli and Palestinian communities that share water resources along the border. Activities range from youth exchanges as a means for learning about each other's problems, to joint solutions for wastewater recycling and the conservation of precious cross-border ecosystems. Likewise, the Arava Institute for Environmental Studies in Israel's southern Negev desert provides a shared educational experience for Israeli, Jordanian and Palestinian students. It also leads efforts to intensify Israeli-Palestinian cooperation on solar energy, which has the potential to play a key role in this sun-rich region.

Obviously, projects such as these will not directly lead to successful peace negotiations between political leaders from both sides. However, they facilitate trust, understanding and civil society cooperation across the conflict divide. Indeed, many participants in the projects have more positive views about the other side and the need for joint environmental action than the average Israeli or Palestinian. This kind of bottom-up change in attitudes eases local tensions and could pave the way for a wider peacebuilding process in the future (see Ide 2017; Ide/Tubi 2020).

inequalities, it is rarely able to promote societal change towards social justice and democracy. (3) Environmental peacebuilding can also be used as a misleading label for projects that are elite-centred, exclude local communities and fuel tensions (and hence do not promote peace). New laws for socially and environmentally responsible mining in Sierra Leone, for instance, discriminated against small-scale miners and fuelled violent unrest (Johnson 2021).

4. RECOMMENDATIONS

The policy recommendations proposed below focus on environmental peacebuilding specifically as an approach to address climate-related violent conflict risks. They will not address wider and more general strategies to mitigate or adapt to climate change or reduce violent conflict risks.

An important first step would be the recognition of cooperative responses to environmental stress by policy-makers, donors and NGOs. All too often, climate change is discussed "only" as a threat multiplier for violent conflicts and migration. Such a unidimensional framing of climate security can pave the way for superficial responses like higher military budgets or more border protection that do not address the root causes of climate change and violent conflict. A focus on environmental peacebuilding, by contrast, allows decision-makers to provide support for cooperative practices that address environmental challenges in a non-confrontational and sustainable way. As this framing also recognises the agency and power of local communities, it is much less contested in the Global South than climate security debates, which are often perceived to be dominated by Western interests.

In the best case, the widespread recognition and discussion of environmental peacebuilding would catalyse further support for such practices. Even though localised environmental peacebuilding at the community level often works well, additional resources are frequently needed to initiate and scale up these efforts. Funding and technical expertise are particularly crucial here and can take the form of paid time off work and travel expenses for inter-community meetings, official recognition of informal resource-sharing institutions, hydrological surveys of underground water flows, and access to renewable energy technologies. States, international donors and NGOs can play a key role in providing such resources.

However, in order for these initiatives to be successful, they must address both social and environmental aspects. Intergroup agreements that promote the peaceful over-exploitation of resources are as detrimental to environmental peacebuilding as technical support that does not address underlying social tensions. In the worst case, environmental protection that discriminates against local users (like the mining in Sierra Leone and fortress conversation examples discussed above) or privileges some groups over others (e.g. providing hydrological expertise to one village only) can even exacerbate tensions. But even in better implemented projects, local people's insights and voices may be marginalised vis-à-vis international experts, national elites and urban NGOs. To harness the synergies between environmental cooperation and peacebuilding, it is therefore of utmost importance to mainstream conflict sensitivity in environmental projects and environmental sustainability in peacebuilding and reconciliation efforts.

Climate change and violent conflicts are two core challenges of our time. However, contrary to popular belief, they do not necessarily reinforce each other. Quite the reverse: Well-designed environmental cooperation and peacebuilding interventions can address climate- and conflict-related risks simultaneously.

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