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Great Insights

The complex link between climate change and conflict

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Great Insights

ECDPM's Great Insights magazine offers a quick and accessible summary of cutting-edge analysis on international cooperation and Europe-Africa relations. It includes an independent overview of analysis and commentary from a wide variety of experts and high-level officials and provides updates on policy debates in Africa and Europe.

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Cover: Haitians wade through the flooded streets of Gonaives after Tropical storm Hanna passed leaving the entire region severly flooded. Photocredit: iOM/Logan Abassi

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Editorial

This issue of Great Insights looks at climate change not as a global phenomenon but rather at *how it is or it isn't* a trigger to violent conflicts.

Climate risks are recognised as transboundary and they need to be tackled through a committed global climate leadership. The relationship between climate change and conflicts has been discussed extensively in various contexts and there are strong indications and a growing recognition that climate change can accelerate or deepen conflicts; however, there is still a lack of consensus on *how and under which circumstances* climate change ignites conflicts, because a *direct* impact is often not easy to trace: developments that might lead to conflicts are characterised by a complex constellation of various factors, therefore, we might not be able to see at first sight a direct climate cause.

Consequences of and responses to climate change are issues debated internationally, both at the EU and UN level. The latest and most notable event was the UN Climate Summit in September and recently the UN Security Council has held debates on *addressing the impact of climate related disasters on international peace and security*. The EU had already stated in the Global Strategy for the European Union's Foreign And Security Policy that sustainable peace has always been and will remain at the centre of the European Union's external action.

All these elements are central to our latest Great Insights. We asked policy makers and analysts to help us answer the following question: *"When is climate change a risk factor for violent conflicts and what can be done to address climate change risk as part of a broader peacebuilding effort?"*.

Outgoing High Representative Federica Mogherini opens the issue in which she builds on her Statement on the occasion of the International Day of Peace where she said: *"Climate change multiplies threats to peace and security as it adds pressure to already fragile livelihoods and destabilises local communities and their environments"*. In her contribution, she looks at the EU efforts to counter the negative effects of climate change impacting on security, as well as the role of the EU in recognising the link between climate and security, and more specifically how climate change is radically changing our security environment.

Her article is followed by the contribution of ten leading experts and analysts that we grouped following three structural angles: first, a look at other international organisations and their ability to trigger change; then, an analysis of regional and local realities with case studies; and finally, a dedicated thematic section ranging from displacement, through gender and natural resources.

The idea of this Great Insights came from the initial discussions on a new project we will be working on for the next couple of years: the Horizon 2020 on '*CAScading Climate risks: towards ADaptive and resilient European Societies*' (CASCADES). The aim of the project is to investigate how climate risks beyond Europe's geographical borders may affect Europe, and to find adequate responses to adapt to these risks or mitigate them. ECDPM is working on this together with several leading climate change European Institutes.

Finally, you might have noticed - by looking at the names of our eleven authors - that they are all women. This is no coincidence: we wanted to give space to some of the female experts who have made a substantial contribution in a field that has been strongly influenced by male thinking.

We hope that you will find the articles informative and the analyses insightful to inspire your work and further learning on the issue.

For all further references and questions with regards to CASCADES, you can contact Hanne Knaepen.

Guest editor

Vera Mazzara
Policy Officer, Security and Resilience Programme, ECDPM

Climate action as a matter of national security

National interest is sometimes used as an argument against climate action. National economic interests are opposed to the interests of the planet. Such an approach is fundamentally flawed. Climate change is today a matter of national interest and national security. It is already destabilising entire countries and regions, with serious security consequences for all of us, at all corners of the world.

By Federica Mogherini

Global warming is not only an existential threat for our friends living on small islands. Extreme weather events have become much more common all around the world, at all latitudes. Other natural disasters – such as desertification – attract much less attention, but their consequences are devastating for millions of people. The most unstable regions in our world are all suffering from so-called "slow onset" natural disasters. And this is happening right at our doorstep, not far from Europe.

In the Middle East, water scarcity is fostering tensions and adding up to long-standing conflicts – from Gaza and the Jordan valley to Iraq. In the Sahel, thousands of jobs are being lost because traditional farming is not sustainable any longer, and people who lose their jobs are more easily recruited by all sorts of militias, criminal organisations or terrorist groups. In the Arctic, new tensions arise as the melting ice opens new trade routes.

Climate change is changing radically our security environment

In today's conflicts, controlling a dam can be even more strategic than controlling an oil well. Natural disasters have in recent years displaced more people than war. Global warming is not just a concern for the next generation: its impact is already with us, and must be tackled here and now.

Three years ago I presented a new Global Strategy for the European Union's foreign and security policy, which recognised the new link between climate and security. With the Strategy we have tried to look beyond the emergencies of our time, focusing on how to make peace and security sustainable in time. This also requires decent access to natural resources, food security and sustainable development. In short, sustainable peace and sustainable security require climate action. As a consequence, our action on the climate-security nexus has four main components.

First, we have worked to address the causes of man-made climate change. Not only did we contribute to building the global coalition that led to the Paris agreement. We are also leading by example in its implementation and supporting our partners to follow suit – financing the green economy and energy transitions all around the world. We are out-performing the goal we set of a 20 per cent reduction in greenhouse gas emissions by 2020, and we have proposed that 25 per cent of the new EU budget for 2021-2027 shall be spent on climate-related actions. Climate diplomacy is now an integral part of our foreign policy.

Second, we have worked to build climate resilience, particularly in the regions where the impact of climate change is greater. We Europeans are together the biggest contributor of public climate finance to developing countries. We have invested in climate change adaptation and food security from Africa to the Arctic. For instance, together with the Food and Agriculture Organisation and the United Nations, we are working on a Great Green Wall around the Sahara: we are helping local communities in their fight against the desert, bringing water and feeding the land so it can be fertile again. This is also a way to prevent the destabilising effects of climate change.

Third, we have improved our reaction to extreme weather events. One example above all: in Somalia, four consecutive years of drought were followed by devastating floods in 2018. A major humanitarian catastrophe seemed inevitable, but the international community took action, and even though the situation in the country remains very difficult, we managed to avoid an even greater tragedy. When Hurricane Irma hit the Caribbean in 2017, we mobilised our Copernicus satellite system – which is a global excellence – to map the damage in real time and assist rescue operations. We did it in a matter of hours, and we did it for free. We are also working to make better use of our militaries in response to natural disasters: Member States are cooperating – in the framework of our new Permanent Structured Cooperation on defence – to set up an EU Disaster Relief Training Centre of Excellence and a Disaster Relief Deployable Headquarters.

No country can tackle the security implications of climate change alone: it is simply not an option. Climate change...can only be tackled through international cooperation

Finally, we have always tried to create new opportunities for international cooperation on climate change. Climate action is perhaps the most indisputable case for multilateralism and regional cooperation, even among countries that do not cooperate on anything else. Take the broader Mediterranean region. It is one of the most conflictual and less integrated regions in the world, yet all Mediterranean countries understand the need to work together against water scarcity and pollution. So in these years we have worked in the framework of the Union for the Mediterranean to create new trans-national cooperation projects on climate in our region.

No country can tackle the security implications of climate change alone: it is simply not an option. Climate change is a national security issue that can only be tackled through international cooperation. The European Union is a cooperative power by definition: we will continue to be a global point of reference for all those who believe in collective climate action as the only answer to a common security challenge.

About the author
Federica Mogherini is the High Representative of the Union for Foreign Affairs and Security Policy / Vice-President of the Commission.

Lake Chad was once one of the African continent's largest bodies of fresh water, but today it is reduced to about 1/20th its former size. Photocredit: Jacques Descloitres, MODIS Land Rapid Response Team, NASA/GSFC.

Keep climate change from fuelling conflict

As climate change advances, it is increasingly disrupting peace and security. This could mean a heightened risk of violent conflict for many already fragile countries with high exposure to climate hazards and limited coping capacity. New approaches are needed to work on the interlinkages between climate change, conflict prevention and sustaining peace..

By Alexandra Pichler Fong and Helena de Jong

The defining issue of our time

The Secretary-General of the United Nations has called climate change the defining issue of our time. Its impact today reaches far beyond the natural environment. Climate change is affecting human systems on a growing scale and is increasingly disrupting peace and security. The Armed Conflict Survey, published by the International Institute for Strategic Studies, this year for the first time included climate change in its overview of global trends affecting conflict. It states, "Climate change is a high-probability, high-impact security threat that will continue to accelerate over the coming decades, with a wide range of implications for the geostrategic environment."

As highlighted in this edition, the changing climate can affect peace and security in different ways: while few experts claim that climate change causes conflict, there is growing consensus that it acts as a powerful "threat multiplier", which interacts with a range of other factors to exacerbate the risk of conflict. By compounding existing stresses and strains, climate change can drive already fragile contexts closer to the edge.

The best defence: Strong institutions and good governance

Experiences of the United Nations throughout the world suggest that resilient states and societies, built on strong institutions and good governance, are the best defence against the adverse consequences of climate change. Ultimately, the ability to cope

with the additional stresses imposed by climate change and to manage processes of transformation will largely determine the impact climate change has on human systems.

Recent research corroborates this view. According to the Global Peace Index (GPI) 2019, produced by the Institute for Economics and Peace, an estimated 971 million people live in areas with high or very high exposure to climate hazards. Of these, 400 million reside in countries with already low levels of 'peacefulness'. The GPI sees a correlation between lower levels of "peacefulness" and lower capacity to cope with climate-related security risks. In other words, as climate change intensifies, a number of fragile countries are in danger of becoming stuck in a cycle of climate disaster and conflict.

That said, it would be wrong to think of climate-related security risks as a challenge reserved for the developing world. While greater exposure to climate impacts and more limited coping capacity indeed place many developing countries at higher risk, climate change could eventually bring chaos to the doorstep of all parts of the world. Just consider the knock-on effects of forced displacement and interrupted global supply chains, or the challenge of devising energy transition policies that are seen to potentially threaten domestic and international balance of powers.

Climate change could eventually bring chaos to the doorstep of all parts of the world

In the face of these complex interlinkages between climate change, conflict prevention and sustaining peace, there is a growing expectation that the United Nations must take a leadership role in developing multidimensional strategies for responses. This is a relatively new work stream for us, with four immediate areas of focus.

Research, documentation and analysis

Scientists are still debating the causal associations between climate change and peace and security on the basis of quantitative data. This is important work, but by the time definitive conclusions emerge it may already be too late to act. What is missing right now – where there is a real gap – is good qualitative research to advance our understanding of the pathways through which climate change impacts peace and security in particular contexts. Identifying such pathways is a challenge in itself. The effects of climate change are highly contextual and manifest very differently in the Sahel versus the Pacific. They also have wildly varying time horizons; think of rapid-onset floods and cyclones versus slow-onset sea level rise. This poses a challenge both for analyses and for operational responses.

Climate adaptation strategies must be made more conflict sensitive

The global evidence base on climate-related security impacts is patchy; we urgently need to build it up. This will help us better understand why similar climate exposure leads to different consequences in different communities. What are the pathways through which climate hazards interact with social, economic, demographic and political factors? What and where are the greatest risks? What are the most effective coping capacities employed by communities and societies? Arguably most importantly, what response strategies have worked – and not worked – so far?

Make peace and security work more climate-informed

Climate risk assessments must inform the full range of peace and security activities, from analysis to conflict prevention initiatives, mediation strategies, peacebuilding priority plans and the footprint of multilateral peace operations. At the same time, climate adaptation strategies must be made more conflict sensitive and mitigation policies considered, taking into account their wider impacts on society. Collectively, the world mobilises hundreds of billions of dollars each year to respond to climate change. If this money is not spent wisely, it can do more harm than good.

Across the UN system, many entities work on climate, the environment, disaster risk reduction and sustainable development. Many others work on peace and security and the prevention of deadly conflict. What is urgent now is to mobilise capacity throughout the United Nations to work precisely at the intersection of these different fields, and to address climate-related security risks collectively at multiple levels.

To jumpstart this work and leverage existing capabilities and expertise, we have established a small inter-agency mechanism between the UN Department of Political and Peacebuilding Affairs (UNDPPA), the UN Development Programme (UNDP) and UN Environment. That mechanism is beginning to gain traction,

working with partners across and beyond the organisation. But this is just a start. Much more needs to be done, in a much broader coalition.

Forge partnerships

Just as climate change is too big a challenge to be addressed by a single entity, its impacts on peace and security exceed the managing capacity of any individual actor. To be even moderately successful in addressing climate-related security risks, the United Nations needs to form strategic partnerships with different actors. These include regional organisations such as the European Union, the African Union and the Pacific Islands Forum, which are very active in this area. We must also invest in learning from the private sector. Many insurance companies already undertake expert climate-related security risk analysis. Academic institutions and think tanks with the capacity to conduct cutting edge research in this hitherto niche field are important partners as well. They offer the possibility of combining their scientific research with our practitioner perspectives, data and qualitative findings from the Sahel, the Horn of Africa, the broader Middle East, the Pacific and elsewhere.

> **We need to know more, and do more, now, to help guide the new approaches**

Develop management strategies and – eventually – prevention strategies

Climate change affects many areas at once and does not fit neatly into a traditional response framework. It has been called a hard security problem with no hard security solutions. Its complexity poses a challenge not just for understanding how climate change impacts peace and security, but also for discerning what to do about it. The UN Security Council in a number of recent resolutions has called on the UN system to assist the Lake Chad region, Mali, the Central African Republic, Darfur and Somalia in developing strategies to manage the adverse effects of climate change on stability. This is hard to do and hard to get right. Even harder is to design prevention strategies that can stop adverse effects from worsening in the future. Being helpful to member states in this area is very much an aspiration, as we seek to collect data, distil experiences and understand more about which strategies and approaches work and which do not. But this is the direction we collectively need to go.

Conclusion

The world has never before sought to deliver peace and security in a climate-changed environment, and there is no roadmap. Clearly, the most viable solution long term is ambitious climate action, beginning with full implementation of the Paris Agreement. But in the meantime, as climate change advances, its repercussions will continue to grow, including on peace and security. We need to know more, and do more, now, to help guide the new approaches necessary for work on the interlinkages of climate change, conflict prevention and sustaining peace.

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The views expressed in this article are those of the authors and do not necessarily reflect those of the United Nations.

Kenya: drought leaves dead and dying animals in northen Kenya.
Picture credit: Brendan Cox / Oxfam

Intergovernmental organisations and climate risks

Intergovernmental organisations (IGOs), such as the United Nations, are increasingly integrating mitigation of climate risks into their mandates. To better understand how IGOs can address climate risks in ways that are just, legitimate and effective, we need to know more about the multilevel nature and (il-)legitimacy of global climate policies.

By Lisa Maria Dellmuth

A challenge shared by all

Climate change, through both its gradual impacts on ecosystems and extreme weather events, poses an entirely new class of risks for humans, communities and states. Many societal threats, such as hunger, vector-borne diseases and loss of housing and shelter, are "multiplied" by climate change and variability.

Since the notion of climate-related security risk emerged in 2007, our emphasis has changed from a narrow focus on state security to a broader perspective including human security (Mobjörk et al. 2016). Climate change threatens human security by undermining the capacities of individuals and their communities to manage, reduce or prevent hazards related to sudden or chronic climate events. Regarding state security, effective climate management is vital to safeguard national sovereignty, military strength and power in the international system.

Climate risks are transboundary in nature, and therefore not amenable to resolution by national governments

acting on their own. To address climate risks, states have increasingly relied on IGOs, such as the European Union, the Global Environment Facility, the United Nations Environment Programme (UN Environment) and the World Health Organization (WHO). Through instruments such as project funding, idea diffusion, social shaming and information provision, IGOs can take actions independently of member states and fundamentally influence climate change adaptation at the global, national, subnational and local levels.

Climate change...poses an entirely new class of risks for humans, communities and states

Climate risks are transboundary in nature, and therefore not amenable to resolution by national governments acting on their own. To address climate risks, states have increasingly relied on IGOs, such as the European Union, the Global Environment Facility, the United Nations Environment Programme (UN Environment) and the World Health Organization (WHO). Through instruments such as project funding, idea diffusion, social shaming and information provision, IGOs can take actions independently of member states and fundamentally influence climate change adaptation at the global, national, subnational and local levels.

Climate risks are transboundary in nature... not amenable to resolution by national governments acting on their own

A complex and polycentric environmental governance landscape

These IGOs operate in an increasingly complex and polycentric landscape of environmental governance. In it, various forms of transnational hybrid institutions have become active: the Red Cross, transnational private arrangements such as the Marine Stewardship Council, and non-state actors such as the Bill and Melinda Gates Foundation. Like IGOs, they have assumed more prominent roles in the governing of global climate concerns.

Of the approximately 200 existing IGOs, more than 50 engage in climate risk governance. Many of these IGOs are increasingly integrating climate issues into their mandates, even though most were not established with climate issues in mind. For example, the UN Security Council has acknowledged that climate change may exacerbate conflict. WHO has initiated a number of prominent climate-health projects, and the UN High Commissioner for Refugees (UNHCR) has sought to address climate-induced displacement of people by participating in talks under the UN Framework Convention on Climate Change (UNFCCC).

This trend raises important questions about the usefulness of integrated governance. Should climate issues be integrated into global conflict-prevention programmes, despite mixed scientific evidence on climate impacts on conflict? Should the Sustainable Development Goals (SDGs), and global development programmes more broadly, integrate climate issues, or would this crowd out other important development topics such as violence against girls, women and LGBT+ persons? Should the UN Security Council deal with climate change, as it has expertise in coordinating policies among a large number of national governments and can reach fast decisions? Or might this inappropriately shift the focus on state security away from human security? To what degree should IGOs with mandates in policy areas as varied as environment, health and security work together to address climate change?

These questions are fiercely debated among researchers and practitioners. Policymakers depend on scientific evidence and interactions at the science–policy interface for good policy solutions. But scientists seldom have clear answers. Recommendations about how IGOs should integrate climate issues into their mandates are often case-specific and rarely based on generic predictions about the impact of policies on climate-change adaptation (Dellmuth et al. 2018).

Two challenges for adaptation research and practice

In view of existing knowledge gaps, I want to highlight two specific challenges for climate change

adaptation research and practice. First, climate change adaptation efforts span different levels of government. While it is analytically useful to distinguish between the local, subnational, national and global governance levels, these levels are in practice interrelated and overlapping. Thus, integrated climate governance has "multilevel" impacts. A UN Environment project on food security can impact global, national, subnational and local efforts to adapt to climate change. Conversely, climate change adaptation efforts of local communities can lead to the "upload" of ideas to the subnational, national and global levels. We need to better understand such multilevel impacts of IGO climate policies.

IGOs' climate policies are consequential for climate change adaptation efforts across all levels of governance communities and states

Second, the legitimacy of IGOs has consequences for their effectiveness in promoting climate security. Legitimacy refers to beliefs among the subjects of a political institution that the institution's authority is appropriately exercised. Different audiences, such as civil society organisations, politicians, public officials and ordinary citizens, will varyingly believe in the legitimacy of IGOs. A legitimate institution enjoys public confidence, which can increase compliance with the rules it proposes and reduce the need to invest scarce resources in coercion and enforcement. For example, greater institutional legitimacy can diminish the need for imposing and enforcing fines and sanctions. This calls for more social science research on the legitimacy of IGOs' addressing climate risks, to better understand their varying effectiveness.

Taken together, IGOs' climate policies are consequential for climate change adaptation efforts across all levels of governance. To understand how IGOs can better address climate risks in just, legitimate and effective ways, we need to know more about the causes and consequences of multilevel and (il-)legitimate climate policies. Social scientists can make a fundamental contribution in enhancing our knowledge on these issues, to assist policymakers in crafting more effective policy solutions to climate risks.

References and further reading:

Adger, N. et al. (2014). "Human security". In C. B. Field et al. (eds), *Climate change 2014: Impacts, adaptation, and vulnerability* (pp. 755-791). Cambridge and New York: Cambridge University Press.

Dellmuth, L. M. et al. (2018). "Intergovernmental organizations and climate security: Advancing the research agenda", *WIREs Climate Change* 9:e496. https://onlinelibrary.wiley.com/doi/full/10.1002/wcc.496.

IPCC (2018). "Summary for policymakers". In V. Masson-Delmotte et al. (eds), *Global warming of 1.5°C: An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.* Geneva: Intergovernmental Panel on Climate Change.

Mobjörk, M. et al. (2016). *Climate-related security risks: Towards an integrated approach.* Stockholm: Stockholm International Peace Research Institute and Stockholm University.

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Securisation without representation: Yet another reason why Africa needs a permanent seat on the UN Security Council

The UN Security council

Climate change is increasingly acknowledged as a global security issue, and the UN Security Council's mandate over it is growing. Yet, Africa still lacks equal standing with other regions and the permanent members of the Security Council. Without permanent representation of Africa on the Security Council, the continent is rendered a subject, not an agent, of global climate governance.

By Lidet Tadesse Shiferaw

Securitisation without representation

The link between security and climate now seems obvious to many. But the framing of climate change as not only an environmental and development issue but also a matter of security, is a recent and contested development.

In 2007, when the UN Security Council organised its first high-level debate on climate change and security, the G-77 group – the largest association of developing nations – argued that climate change was beyond the Security Council's remit. It should, they said, be dealt with in other bodies of the UN. China, Russia and South Africa similarly questioned the compatibility of the issue with the Security Council's mandate. The small island developing states of the Pacific, themselves G-77 members, requested a UN General Assembly debate on the security implications of climate change in June 2009. Later that year, the UN Secretary General released its report which named climate change a "threat multiplier" that can aggravate existing institutional, socio-economic and political drivers of conflict.

The framing of climate change as a threat to global peace and security brought international attention to the issue. But it also raised the danger that regions such as Africa, which are expected to be particularly affected by the impacts of climate change, would be seen as a security threat – as "disasters waiting to happen" – and militarised in a pre-emptive bid to contain the situation (see Hartmann 2014). For example, a single narrative emerged of the Sahel as a region where climate-induced fragility will displace many, force many more

into migration, and push other into violent extremism. This has led to a securitisation and 'othering' of Africans and people from the region. They are seen as a security threat rather than as victims-survivors needing protection.

This perception is evident in the European narrative around managing migration from Africa. This narrative has contributed to the region's militarisation, as more foreign and regional actors deploy forces to 'contain' migration, illicit trade and armed groups, without necessarily addressing the structural issues at the heart of the continent's fragilities (Davitti and Ursu, 2018).

What does the securitisation of climate change mean for Africa?

Recognition of climate change as a global security issue that requires a global response could help Africa galvanise the support it needs to respond to climate change. However, to do so without further securitisation of people and regions in fragile contexts is a difficult balancing act. Africa is unfavourably positioned in the broader climate change negotiations, which remain marred by asymmetries.

> **Africa's unfavourable position in the broader climate change negotiations could spill over into climate security governance**

Africa's carbon footprint is marginal compared to other regions, yet the continent is the most exposed to the effects of climate change. While the goal to cut down carbon emissions and switch to green industries is laudable, in the short term, trade offs between industrialisation and environmental sustainability seem inevitable (Bogott and Van Wyk, 2016). To minimise the impacts of these trade offs on developing countries, the African Group of Negotiators (AGN) has emphasised the need for adequate technological and financial support for climate adaptation and not just mitigation. However, two thirds of climate finance in 2017 went to mitigation, according to the OECD (2018).

Africa's unfavourable position in the broader climate change negotiations could spill over into climate security governance. To prevent this from happening, the growing recognition of the climate-security nexus as a global issue, and the UN Security Council's mandate over it, need to be matched with equitable and permanent representation on the Security Council of the most vulnerable regions, particularly Africa and the small and developing island states of the Pacific.

Make Africa an agent, not just a subject, in climate governance

The African Union is in the process of appointing a special envoy for climate change and security who will work with the existing Committee of African Heads of State and Government on Climate Change. However, this is not an end in itself. To secure equitable representation of the continent's interests in global climate security governance, three further changes are key.

First, awareness of the climate-security nexus needs to be reflected in global legal and policy frameworks. In academic and policy circles, the link between climate change and security is clear, as is the link between climate change and forced displacement. Yet, climate-induced displacement and migration are not yet recognised in international legal frameworks governing migration (see WH 2018). For instance, people fleeing extreme climate events and crossing borders are not recognised as refugees and hence ineligible for asylum, unlike people fleeing war or individual persecution.

As the region most affected by the effects of climate change, the African continent should mobilise its collective voice to weigh in on the policy and legal discourse around the climate-security nexus. Reaching consensus among the continent's 55 countries, with their varying levels of exposure and vulnerabilities, will be difficult, but it is a necessary step to secure the most basic of the continent's interests. Appointment of an African Union special envoy on climate change and security will be a positive step towards driving the climate security agenda, both at home within the African Union and abroad in multilateral platforms.

> **Awareness of the climate-security nexus needs to be reflected in global legal and policy frameworks**

Second, coherent mechanisms are needed to track, monitor and account for climate finance. In the 2009 Copenhagen Accord, developed countries promised to channel US $100 billion per year to developing countries by 2020. However, types and

sources of climate finance are broad, and monitoring these flows remains an elusive and complex task (see Tirpak, Brown and Ballesteros 2014). Robust monitoring facilities and tools are needed to ensure that developing countries are indeed benefitting.

For Africa, monitoring accountability and transparency around climate finance is essential both to ascertain whether sufficient funds are being allocated to climate adaptation, and to ensure that climate finance is not conflated with development assistance (see World Bank 2010). To these ends, the continent needs to amplify its voice within existing funding mechanisms, such as the Green Climate Fund and the Global Environmental Facility, while also partnering with the African private sector and global civil society to call for clearer definitions, governance and monitoring of climate finance.

Third, and this is the elephant in the room, if climate security is deemed a global security concern and *within the remit of the UN Security Council,* equitable and permanent representation of Africa on the Security Council is imperative.

The absence of permanent representation of Africa on the UN Security Council, while unfortunate in itself, presents a particular disadvantage to the continent regarding climate change. Africa will bear the brunt of climate change, which it had a marginal role in inducing. Yet, it remains without veto power in the UN Security Council. Ironically, many of those with much larger carbon footprints occupy permanent seats.

As the concept of climate change as an issue of global security develops, and the mandate of the UN Security Council over it grows, Africa's inability to stand on equal footing with other regions and the permanent members of the UN Security Council renders it a subject, but not an agent, of global climate governance.

Without permanent representation on the UN Security Council, with the full rights the position entails, the asymmetry in global climate change cannot be reversed. Neither can it be ensured that global climate security policies respond to Africa's needs, without militarising the continent and securitising its people.

We are already in 2019. As the President of Sierra Leone Julius Maada Bio said in his address to the UN General Assembly last month, "This long-standing injustice … ought to be addressed."

Further reading

Bogott, N. and Van Wyk, L. A. 2016. Zooming in on Africa in the international climate negotiations. In: Luther, S. (ed). *Klimawandel Politische Implikationen und soziale Verwerfungen. AMEZ 16*. Munich: Hanns-Seidel-Stiftung.

Davitti, D. and Ursu, A. E. 2018. Why securitising the Sahel will not stop migration. FMU Policy Brief 02/2018. Nottingham: University of Nottingham. www.nottingham.ac.uk/hrlc/documents/fmu-policy-brief/pb-2-why-securitising-the-sahel-wont-stop-migration.pdf

Hartmann, B. 2014. Converging on disaster: Climate security and the Malthusian anticipatory regime for Africa. *Geopolitics,* 19(4): 757-783.

OECD. 2018. Climate finance from developed to developing countries: 2013-17 public flows. Paris: OECD Publishing.

Tirpak, D., Brown, L. H. and Ballesteros, A. 2014. Monitoring climate finance in developing countries: Challenges and next steps. Working Paper. Washington, DC: World Resources Institute. www.wri.org/publication/monitoring-climate-finance-developing-countries-challenges-and-next-steps.

WH. 2018. Why climate migrants do not have refugee status.

The Economist Explains. 6 March. www.economist.com/the-economist-explains/2018/03/06/why-climate-migrants-do-not-have-refugee-status.

World Bank. 2010. Monitoring climate finance and ODA. Issues Brief 1. Washington, DC: The World Bank.

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Kri Kri, on the shores of Lake Chad.
Copyright: EC/ECHO/Anouk Delafortrie

Climate change, conflict and crisis in Lake Chad

Lake Chad is caught in a conflict trap. Climate change and conflict dynamics create a feedback loop. The impacts of climate change seed additional pressure for conflict, while conflict undermines communities' capacity to cope with climate risks. If the region is to break free from the conflict trap, climate risks have to be tackled as part of peacebuilding efforts. Lake Chad can once again become an engine for sustainable livelihoods and stability.

By Janani Vivekananda

Caught in a conflict trap

Lake Chad is an ecological miracle: a freshwater lake in the middle of the arid Sahara desert. Yet, since 2009, the region has been destabilised by alarming violence between armed opposition groups (such as Boko Haram and Islamic State West Africa) and state security forces. The ensuing humanitarian crisis has displaced over 2.5 million people from their homes, leaving vast areas insecure and tens of millions people without adequate services. Currently, an estimated 10.7 million are in need of immediate humanitarian assistance. While the current crisis was triggered by violence linked to armed groups, the situation has deep roots in longstanding

developmental challenges. There is widespread inequality and decades of political marginalisation. This has instilled an entrenched sense of exclusion and lack of trust between communities and the government. Against this backdrop, the region also faces significant environmental stresses.

Conflict undermines communities' capacity to cope with climate risks

The changing climate has played a very real role in exacerbating and prolonging the existing crisis. But the tendency to draw a direct line of causation between the alleged shrinking of Lake Chad and conflict and the intractability of the humanitarian emergency misses the real role of climate change.

Current research demonstrates that global warming is not shrinking Lake Chad, which actually grows and contracts intra- and inter-annually (Nagarajan et al. 2018). Instead, more changeable and unpredictable rainfall patterns, induced by climate change, have had the most impact on the resilience of communities around the lake. The resulting resource scarcity, livelihood insecurity and extreme poverty have exacerbated existing social tensions.

Lake Chad Bassin crisis january 2017.
Photo: Espen Røst / Bistandsaktuelt – newspaper on aid and development

Adelphi, with support from the Dutch and the German governments, has just completed a climate-fragility risk assessment of the Lake Chad region to better understand the risks from the ground up. With a team of local conflict researchers and climate change experts from the Institut de Recherche pour le Développement (IRD), the assessment brings together nuanced qualitative data on conflict from over 250 community-level interviews, with brand new satellite observations of the lake, to better understand the risks and inform linked solutions to the region's complex problems.

Four key climate fragility risks

The assessment points to four key climate fragility risks affecting the stability of the region:

1. **Climate change and ecological changes increase livelihood insecurity and social tensions:** Increased climate variability – especially less predictable rainfall patterns – is undermining livelihoods, livelihood diversity and resilience, leading to adverse livelihood strategies such as deforestation and sex for food. These causal links are strong and easy to trace. The pressures they exert undermine social cohesion and increase tension and conflicts at all levels, from within families to between different ethno-linguistic groups.

2. **Conflict and fragility increase vulnerability to climate risks:** The ongoing conflict has significantly undermined community resilience, including populations' ability to adapt to climate change. For example, blocked access to parts of Lake Chad by Boko Haram or state security forces has deprived communities of important livelihood diversification options, such as fishing and farming on the fertile shore lands. This has reduced their coping capacity, which impedes future efforts to address conflict and climate risks.

3. **Climate change exacerbates conflicts over natural resources**: Before the rise of Boko Haram, there was already a trend of increasing conflicts around natural resources, particularly over land and water, and often between different occupational groups, such as pastoralists and farmers. These conflicts diminished with the emergence of conflict with armed opposition groups, but they have seen recent resurgence. After the Boko Haram crisis is stabilised, it is likely that they will regain salience. It is as yet uncertain how they will play out in the new context of reduced resilience.

4. **Livelihood insecurity plays into recruitment to armed groups:** Recruitment into non-state armed opposition groups is increasing, with retention rates sustained by social and economic inequalities. People with increasingly vulnerable livelihoods are particularly susceptible to the financial incentives offered by armed groups for joining. There is also an emerging wave of persons choosing to return to Boko Haram from the camps for internally displaced persons (IDPs). These trends are directly linked to climate change. Climate change and conflict have made jobs less viable, while the lack of livelihood options and equitable service provision in the IDP camps has fuelled disruption. To be clear, climate change does not create terrorists, nor does it turn law-abiding citizens into criminals. But a warming world acts as a "threat multiplier", worsening existing risks and making it harder to work on solutions. The linked implications of climatic variability, human-induced ecological damage and conflict on different livelihood strategies are still unclear and need to be better understood.

Taken together, these risks create a self-reinforcing feedback loop between increasing livelihood insecurity, climate change vulnerability, and conflict and fragility. Conflict and fragility undermine the resilience of communities, making them more vulnerable to climate change, while climate change at the same time is undermining livelihoods and exacerbating competition around scarcer natural resources. If not broken, this vicious loop threatens to perpetuate the current crisis and take the region further down the path of conflict and fragility.

> **A climate fragility risk assessment is a good first step to understand the joint risks**

What should be done?

To tackle this crisis with any kind of sustainability we need a thorough understanding of what caused it to spiral in the first place. Despite the significant role climate change plays in shaping the risk landscape, there is as yet no peacebuilding, stabilisation, humanitarian or development process that explicitly considers the role of climate change in either risks or shaping appropriate responses.

The most effective solutions will be ones that address the underlying causes of the crisis and are sensitive to the environmental changes brought about by climate change. Stabilisation, humanitarian and development efforts in the region must better understand the interactions between environmental and climatic factors and the security and humanitarian context. This requires greater cognisance of the linked conflict, humanitarian, environmental and developmental risks in the region and steps towards ensuring that interventions do not worsen climate fragility. For example, reintegration and resettlement programmes should include a clear focus on livelihood planning that acknowledges the variability of climatic conditions in the region.

A climate fragility risk assessment is a good first step to understand the joint risks and inform joint solutions to the complex problems faced in the Lake Chad region. This will be the best first step in any context facing both climate change and conflict risks. But an assessment is only as good as the institutional will and capacity to take up and respond to its findings. This points to the need to generate understanding and buy-in to address these compound risks across institutions that have historically worked in separate silos.

The Berlin Climate and Security Conference on 4 June 2019 was a milestone towards generating greater awareness and buy-in for more coherent approaches. The UN Secretary-General's Climate Action Summit in September 2019 was another important marker in institutionalising such an approach within the UN system. The proof will be in joined-up programming on the ground.

Further reading

Vivekananda, J., et al. (2019) *Shoring up Stability.* Berlin: Adelphi. www.shoring-up-stability.org

Nagarajan, C., B. Pohl, L. Rüttinger, F. Sylvestre, J. Vivekananda, M. Wall and S. Wolfmaier (2018) *Climate-Fragility Profile: Lake Chad Basin.* Berlin: Adelphi.

About the author

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The when and how of climate conflict: The case of Mali

Fulani farmers in Mali.
Photo: supplied by author

Climate change itself is not a direct cause of violent conflict. Yet, extreme changes in climate increase the risk of conflict by exacerbating people's existing political, economic and social vulnerabilities.

By Basak Kalkavan

Under what circumstances arisk factor?

Studies looking at the relationship between climate and conflict have produced diverse and contested results. Today, most experts acknowledge that climate change acts as a "threat multiplier". While most earlier research focused on the statistical relationship between conflict dynamics and historical patterns of climate change, studies now recognise and incorporate societal factors into the equation, looking at both qualitative and quantitative variables. The question is no longer whether climate change is a direct cause of conflict, but rather, under what circumstances is climate change a risk factor for violent conflict?

"Ground zero" of climate change

The risk of conflict is highly context-dependent. Certain regions are especially vulnerable to extreme weather. Dubbed the "ground zero" of climate change, the Sahel is one of these regions. The European Union and UN Security Council have both recognised climate change as a significant factor in propelling conflict and security dynamics across the Sahel.

Despite it being one of Africa's most productive crop zones, extreme and rapid changes in rainfall and temperature have hindered agricultural production here, worsening communities' insecurities and weakening social relations.

This has made Mali a hot spot for discussions on the climate–security nexus. The country is particularly vulnerable to climate change due to its slow economic development, limited suitable land for agriculture and rapid population growth. Mali also embodies certain factors that are especially influential in determining conflict risk, such as weak capacity of the state, intergroup inequality and a recent history of violent conflict.

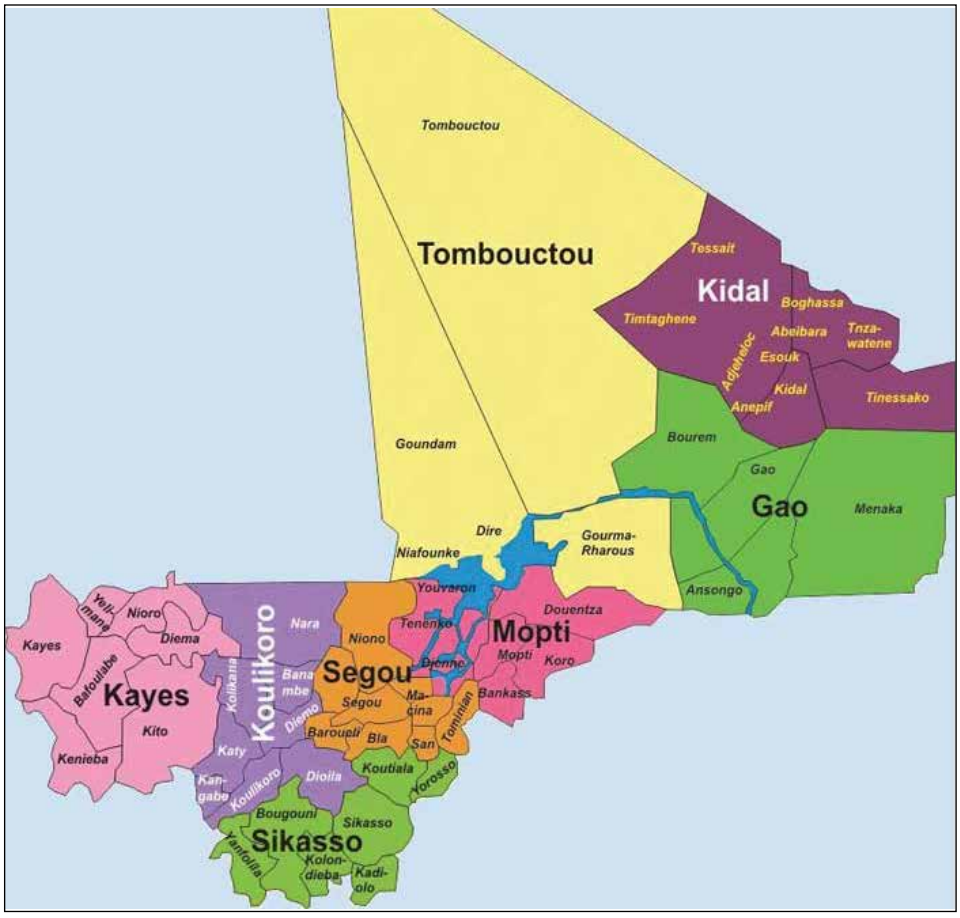
Security dynamics in Mali gained widespread international attention after the coup d'état in 2012. However, climate-induced violence has been part of the country's social structure for many decades.

An important step towards understanding the role of climate in these conflict dynamics is to look at the implications of climate change at the subnational level. In Mali, climate-related conflicts have often taken the form of communal conflicts, involving groups identified along ethnic, linguistic and religious lines. This can imply other common identities, based on history, culture, livelihood and core values.

Particularly in Africa, ethnicity and livelihoods are closely interlinked. Many communal conflicts in Mali centre on access to land. Different land users, such as farmers and herders, often belong to specific ethnic groups, such as the Dogon and Fulani, respectively. Thus, clashes between different occupational segments of society frequently have livelihood and ethnic dimensions.

Different adaptation strategies have changed the traditional routines of farmers and herders

The 23 March 2019 massacre was Mali's latest and deadliest incident. Some 160 civilians, mostly semi-nomadic Fulani herders, were killed in the villages of Ogossagou and Welingara in the Mopti region, allegedly by Dogon farmers. The international community looked first to radicalisation and ethnic divisions to explain the attack. But climate change has since been recognised as creating fertile grounds for the conflict to erupt.

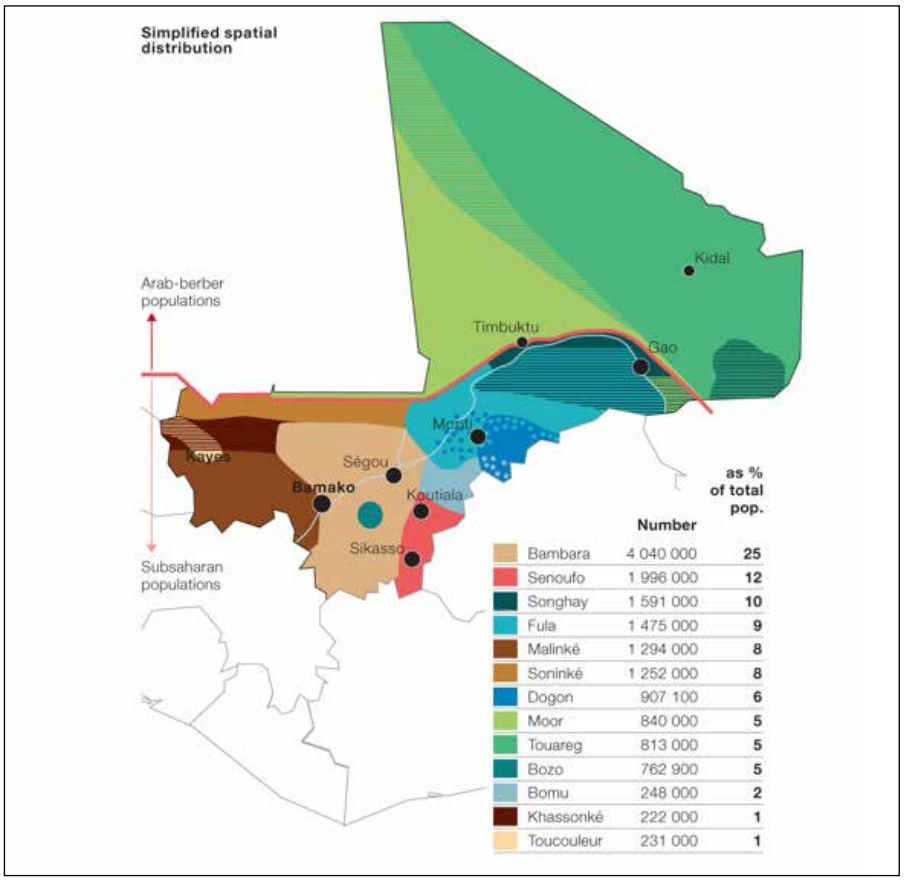


Map 1: Mali's administrative divisions and the informal demarcation of its 'north'

Source: https://www.clingendael.org/pub/2015/beyond_dichotomy/1_understanding_the_politics/

A continuous cycle of droughts and floods has had detrimental impacts on Malians. Since the 1960s, rainfall has diminished by 30%, destroying more than a third of livestock and leading to widespread food shortages. This, combined with a mean annual temperature increase of 0.8°C, has accelerated deforestation and put further pressure on land. Declining resource availability threatens both food security and livelihood security. If not addressed, the predicted losses in livelihoods could mean an overall loss of welfare ranging from US $70 to $142 million. That would increase those at risk of hunger from 44% to over 70% of the population.

Different adaptation strategies have changed the traditional routines of farmers and herders in the country, increasing the frequency of inter-group conflict in certain areas. Changes in the environment and reduced resources has forced herders to change their migration paths, closer towards the near-permanent water



Map 2: An overview of the diversity of Mali's different ethnic groups

From: https://www.clingendael.org/pub/2015/beyond_dichotomy/2_identifying_systemic_constraints_on_the_provision_of_justice/

Source: OECD, An Atlas of the Sahara-Sahel, Paris, Sahel and West Africa Club, 2015

resources in the south and central regions. Some have now settled in locations where they traditionally spent only short periods of time.

Routes that have existed for hundreds of years are now disappearing. Herders see their loss as more than just a loss of passage, but also as a forfeiture of part of their identity. At the same time, agricultural lands have expanded substantially over the past 40 years, as the government has sought to increase agricultural production. While this has helped farmers sustain their livelihoods, it has taken away lands that were once used by herders.

Mali's structural inequalities: The bigger picture

Although Mali is highly vulnerable to the shocks and stresses of climate change, these vulnerabilities are not equally distributed. The minority herder groups, such as Tuaregs, Fulas and Arab Berbers, are more vulnerable than the majority agricultural ethnic populations. Structural inequalities that have existed since colonial times have elicited continuous tension between the two groups. However, extreme changes in the climate have worsened these dynamics, playing a role in outbreaks of violence.

Inequalities have increased the exposure of herder groups to climate hazards, while reducing their ability to cope with and recover from the effects of climate change. They have also aggravated long-held grievances and deteriorated relationships between the two livelihood groups.

Both the French and post-colonial governments favoured farmer groups' access to land. They mistrusted the "primitive" nomadic communities, considering them "the other", inhabitants of the wilderness, not belonging to civilisation. Various government reforms have attempted to "sedentarise" the herder groups, as their lifestyles were portrayed as obstacles to progress, urbanisation and modernisation, as well as incompatible with the idea of a strong developed nation.

Despite the historical evidence that mobile livestock systems in the Sahel have high adaptive capacity and ecological efficiency, land tenure reforms have emphasised agricultural expansion. As a result of the shift from mobility to sedentism, many herder communities have been pushed to marginal regions, and their capacity to cope with the changing environment has been significantly reduced.

Inequalities have increased the exposure of herder groups to climate hazards

Moreover, since the colonial era, institutional and customary practices of land tenure have been considerably transformed. Historically, local communities oversaw natural resources management and dispute settlement.

The introduction of new political systems, property rights and land tenures brought situations of legal pluralism. The legal framework that was adopted during the decentralisation process in the 1990s resulted in both competition and overlap between legal and customary institutions. The lack of a comprehensive

and unified legal framework has triggered intra- and inter-communal tension, as most development programmes have given priority to agriculture-oriented policies. This has left herders without legal recourse to seek compensation for the disappearance of their grazing lands. While climate change is disrupting the physical availability of natural resources, these developments have erected social boundaries that determine who can access what, when and how.

Measures for climate change adaptation cannot be developed without understanding the local context

The preference for agricultural development has also created a power imbalance. More farmers are being incorporated into the political system, while herder groups' access to and control of land for production is decreasing. This, combined with rapid growth of the agricultural, commercial and industrial sectors, has generated greater competition and conflict over basic natural resources. As a result, herders increasingly perceive themselves as "victims" and see taking up modern weapons as the way to challenge existing hierarchies, as well as to contest the privileges of urban elites and traditional local aristocracies.

Moving forward

Measures for climate change adaptation cannot be developed without understanding the local context – in this case, the structural inequalities within Malian society. All proposed measures need to be sensitive to the contextual factors unique to socio-ecological systems. Mali provides a clear example of the role that climatic shocks and stresses can play in outbreaks of violent conflict, by worsening long-existing social, political and economic grievances and tensions between different communal groups.

The task to build resilience to the impacts of climate change offers a unique opportunity to tackle the institutional deficits that perpetuate vulnerabilities.

We need stronger political commitment and concrete strategies in developing adaptation measures

By recognising the herder population as a valuable part of society, and their lifestyle as a form of proactive adaptation, grievances shared by these groups could be reduced. Increasing political representation of herders, as well as establishing a unified legal framework for natural resources management, would also pave the way for a more harmonious society in which all voices are heard. In this regard, some progress has been made. Both national governments and the international community have begun to recognise the security risks posed by climate change and resource pressures. However, issues of access to resources and the multiple dimensions of inequality that encompass ethnicity, gender, age, race, religion and culture have still not been fully addressed.

We need stronger political commitment and concrete strategies in developing adaptation measures. Only then can the international community prevent clashes from erupting into full-blown conflict – in Mali, and in the rest of the Sahel.

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Daily life in Zaatari refugee camp in Jordan
Photo: World Bank/Flickr.

Climate change, conflict and displacement: Sides of the same coin

Climate change is increasing the incidence of extreme weather events with the potential to destroy millions of dollars of personal property and public infrastructure. As households and businesses adapt to this new normal, the international community must see migration and security not as separate outcomes but as diametrical extremes of the simple need for adaptation.

By Joyce Chen

A more volatile, less predictable future

Heat waves, droughts, floods, hurricanes, cyclones and wildfires. Extreme weather events have increased in frequency and severity. With continuing climate change, the Intergovernmental Panel on Climate Change reports that such events will also fluctuate more in spatial extent, duration and timing.

Recent years have witnessed the potential of such events to displace thousands of people in a very short time, creating new challenges in provision of disaster relief. Not only do affected areas require recovery and rebuilding, but large diasporas place stress on destination communities. This can lead to conflict, as social and economic systems become overtaxed and scarcity more noticeable. Moreover, large groups of people on the move pose a security risk, particularly when traversing national borders.

The climate–migration–conflict nexus

The links between climate change, migration and security are complex. Climate change has been found to cause migration and to exacerbate the risk of conflict. In some cases, migration is the intervening factor between adverse weather and conflict while, in other cases, migration is itself the consequence of climate-induced conflict.

Both are evident in Syria. Here, massive drought led to a collapse of agricultural production, prompting many rural

residents to abandon their homes and go on the move. The influx of migrants into Syrian cities magnified existing social unrest, and this likely contributed to the outbreak of civil war. The civil war has prompted even more migration, with large numbers of Syrians seeking refuge in Turkey and Europe. This migration, too, has created new security risks, straining long standing diplomatic ties and provoking violent protests.

This kind of cycle between migration and conflict can be self-perpetuating. Climate change feeds into the nexus as a 'threat multiplier', intensifying competition for already scarce resources, including food, water, energy and even habitable land. Security risks may begin internally but can easily spread internationally, affecting poor and rich countries alike, particularly in the face of global challenges such as infectious diseases and terrorism.

Twin symptoms of maladaptation

Underlying these complex, multidirectional linkages between climate, conflict and migration is the unremitting need for adaptation. When wildfires and soil salinisation strain local industries, other options must be found. In general, people prefer to stay in place. Thus, where alternative local livelihoods are viable, population displacement will be minimal. But, without migration as a release valve, local population pressures are more likely to ignite conflict. On the other hand, migration can trigger conflict in destination areas, even as it eases the situation at the place of origin.

Climate change has been found to cause migration and to exacerbate the risk of conflict

Migration and conflict, therefore, are opposing symptoms of the same condition: lack of resilience and limited capacity to adapt. In the case of migration, a lack of local options forces people to move out, which may trigger conflict in receiving communities. In the case of local conflict, people who choose to stay clash over increasingly scarce resources, which may prompt later waves of migration.

Enhancing resilience to climate change can simultaneously alleviate migration flows and minimise security concerns. With more opportunities to adapt in place, vulnerable communities will feel less pressure to migrate, and those who stay will face less competitive pressure as resource use is diversified. However, resilience need not mean staying in place. Where local options have been exhausted or the environment has become too volatile, migration may be essential to avoid conflict. Indeed, those who are trapped in place may be at the greatest risk of either instigating or experiencing conflict, or both.

Managing migration to mitigate conflict

To address migration and security effectively, we must recognise these phenomena as not simply linked but as part and parcel of the same underlying process. By reframing the climate–migration–conflict nexus around local resilience, we can see both mobility and immobility as precursors to security threats. Where mobility is high, there is greater risk of conflict in migrant-receiving areas. But, where mobility is low, there is greater risk of internal conflict, as a scarcity mentality drives people towards increasingly desperate options.

Proactive approaches to climate migration can offer another means to mitigate security risks. This may mean stemming population outflows by creating more opportunities locally, particularly those that shift the economy to more sustainable patterns of resource use. These could include developing crops that are tolerant of drought, heat or poor soil quality to diminish the impact of climate change on agriculture. Encouraging the development of non-farm industries in rural or peri-urban areas can also reduce the need for migration, while setting the stage for more balanced and equitable growth in the future.

Perhaps more challenging will be recognising when adapting is not, or ceases to be, a viable option. In these cases, migration flows need to be not only directed but encouraged, using a variety of policy levers ranging from zoning and real estate laws to managed retreat. Anticipating the need for migration out of environmentally vulnerable areas is key to pre-empt broader security risks, as it allows for more deliberate placement of residents across both time and space. This will be particularly important in areas where catastrophic events have the potential to rapidly displace or impoverish large numbers of people, as in cases of sea level rise and desertification.

Former US President Ronald Reagan observed, "Peace is not absence of conflict; it is the ability to handle conflict by peaceful means." Similarly, migration and conflict are not distinct consequences of climate change but, rather, contrasting expressions of a singular underlying challenge: the need to develop climate resilience.

About the author

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Mauritania village struck by drought
Photo: UN Photo/John Isaac.

Human mobility and climate change: Migration and displacement in a warming world

Migration and climate change have each in their own right become defining global political issues. The links between human mobility and climate change require comprehensive policy approaches that minimise population displacement while facilitating migration as an adaptive force.

By Caroline Zickgraf

Climate change is shaping human mobility

Globally, the impacts of climate change on migration are far-reaching and complex. Publicly and politically, however, the story seems rather simple. As the impacts of climate change intensify (sea-level rise, climate variability and extreme weather events), more and more people will be forced off their lands and out of their homes to seek "greener" pastures. This is already happening in some parts of the world. However, this rather linear, causal narrative fails to capture the myriad ways that climate change is shaping human mobility.

Importantly, the issue is not a future hypothetical. Millions of people are already on the move, by choice or forced due to climate impacts. The changing climate is destroying coastlines (where most of the world's population resides), degrading land and reducing agricultural productivity among people whose livelihoods depend directly and indirectly on natural resources (farmers, fishers, pastoralists).

Assessing climate-related mobility

Discourse on how climate change affects human mobility often focuses on future flows of displaced people: those who will be forced to flee their homes by extreme weather events like

floods and hurricanes. With the impacts of climate change and the increasing concentration of populations in areas exposed to storms and floods, disaster displacement is likely to grow and become more intractable in the future.

Disasters have caused more new internal displacements than conflict over the past ten years.

"Guesstimates" circulate predicting that 200 million, 300 million or more will be displaced due to climate change by 2050. No robust global figure for future climate displacement exists. What we do know is that massive disaster displacement is already occurring in several regions of the world. According to recent reports by the Internal Displacement Monitoring Centre, weather-related hazards already account for more than 87% of all disaster displacement globally, and disasters have caused more new internal displacements than conflict over the past ten years.

Displacement, however, is only one of the forms of human mobility related to the impacts of climate change. Climate change also affects people's livelihoods, especially when those livelihoods are dependent on natural resources. Fishing, farming and pastoralism become more difficult with soil salinisation and degradation, erratic rainfall, droughts, rising temperatures, and depletion of fish stocks and other biodiversity.

In countries where economies are largely dependent on natural resources, migration can offer an escape from poverty and food insecurity. Yet, while we have numbers that account for disaster displacement, it is harder to quantify these arguably more voluntary migration flows, particularly in response to slow-onset impacts of climate change. Because their migration is driven by several factors, and because no consensual definition of a "climate migrant" exists, these people are frequently labelled "economic migrants" and not privy to humanitarian protection instruments.

Similarly, conflict and climate change can interact to incite displacement, further blurring the lines between traditional migration categories. Considering all of the direct and indirect pathways linking climate change and human mobility, the actual figures are likely to be far greater than current estimates.

Moving beyond numbers

Certainly, more robust figures (current and future) are needed to design and implement policies to manage migration and reduce displacement at various scales. But this still overlooks the fact that climate change not only affects the scale of migration and displacement, it also alters the character of human mobility. Asking only "how many?" masks important shifts in migration patterns and dynamics. This makes it difficult to design and implement comprehensive and effective policies.

Climate change... affects the character of human mobility

Where people go, how far they go, how long they stay, and what happens when they arrive are all affected by climate change. As local livelihoods become less tenable, mobility may take new forms or alter traditional ones. In Senegal, fishing migration is nothing new: fishers have long moved with the seasons. But with overfishing and depletion of local fish stocks and biodiversity, they are shifting their trajectories and staying longer in neighbouring countries like Mauritania.

Moreover, people do not always move in (externally) expected ways. We tend to assume that people move out of harm's way, leaving dangerous place A (community of origin) for safe place B (community of destination). Research, however, shows that people may move into risk zones. Migration is multi-causal, so perceived environmental risk is not the only factor in migration decision-making.

In West Africa, for example, drought-prone rural villages are often abandoned in favour of better prospects in urban areas. The economic opportunities in coastal megacities draw in a young, active labour force, but these newcomers often arrive in precarious conditions and establish themselves in flood-prone areas. Thus, while they escape drought, their flood displacement risk increases. In other cases, environmental risk is precisely what makes a destination appealing. In Cotonou, Benin, for example, the repeated destruction of coastline homes attracts people who cannot afford to live elsewhere.

Migration as adaptation

Because the dominant discourse focuses on the security and humanitarian implications of future "climate refugees", it overlooks the simple fact that not all people move when faced with intensifying climate impacts.

In any area experiencing climate change, some people, if not the majority, will stay. For one, migration is not available or accessible to all. Migration takes resources, be they financial (money), social (networks), political (visas) or otherwise. When Hurricane Katrina struck,

many of those left behind were unable to evacuate due to lack of transportation and/or friends and family outside the city. Physical ability, age, gender and education, too, affect people's capacity to migrate.

Secondly, not all people want to leave their homelands for another city, country or continent. Immobility, like migration, can be a choice. Cultural attachment to land, religious sites and the presence of loved ones can all keep people in place, even in dire circumstances. Therefore, we must recognise that not all people will be able to or want to get out, with some potentially becoming trapped in dangerous situations.

Despite the generally negative perception of the climate–migration nexus, migration stemming from climate change is not necessarily a bad thing, as exemplified by the plight of those trapped in situ. Certainly, displacement should be avoided whenever possible, but an ever-increasing number of studies points to the fact that migration can benefit migrants and their communities of origin and destination alike.

Voluntary, pre-emptive migration can, in fact, reduce displacement risk. In Comoros and Senegal, for instance, remittances sent back from abroad enable families to build stronger, more resilient housing. In Vietnam, internal migration brings financial assistance but also education and new skills to local farmers in the Mekong Delta, while government-led relocation programmes move them away from landslides, mudslides and riverbank erosion. Migration, therefore, can be a powerful tool for adaptation to climate change.

Two-pronged approaches

Climate and migration interact in many ways, so policy has to be cohesive and comprehensive at all levels and across the development, migration and climate domains. This requires two-pronged policy approaches that seek to minimise displacement while facilitating migration as an adaptive force. Taken together, these two policy prongs are mutually reinforcing.

Displacement, internal or cross-border, has thus far been the primary concern of multi-level stakeholders seeking to prevent humanitarian crises resulting from climate change. To this end, several international policy processes and platforms are underway. One is the Platform on Disaster Displacement (PDD), created following the three-year Nansen Initiative, to tackle cross-border disaster displacement. Along with several international and civil society organisations, the PDD successfully campaigned for the inclusion of environmental concerns in the Global Compact for Migration.

> **Not all people will be able to or want to get out, with some potentially becoming trapped in dangerous situations**

In the climate arena, under the UN Framework Convention on Climate Change, the Warsaw International Mechanism for Loss and Damage created the Task Force on Displacement to develop recommendations and integrated approaches to avert, minimise and address displacement due to climate change. It is active at the subnational, national, regional and international levels. As evidence mounts that encouraging and better managing certain forms of migration can reduce the likelihood of humanitarian crises, international organisations, NGOs and academia alike have begun to push for inclusion of migration-as-adaptation in international fora alongside displacement initiatives. In 2018, the aforementioned Task Force on Displacement invited the Parties to "facilitate orderly, safe, regular and responsible migration and mobility of people… by enhancing opportunities for regular migration pathways, including through labour mobility".

To what extent this will make its way into policy-on-the-ground remains to be seen, as many politicians and stakeholders remain wary of promoting any form of migration, preferring to concentrate on adaptation measures in situ as a means to alleviate population pressures in destination areas.

Despite the strides made, both scientific and political, we still have a long way to go. Data gaps persist, qualitative as well as quantitative, which hampers development of comprehensive, evidence-based policy approaches. A more nuanced picture of the climate–migration nexus is emerging, but unfortunately like many aspects of climate change, progress towards actually implementing effective, human rights-based solutions remains slow.

About the author

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Scenes from Ifo 2 Refugee Camp in Dadaab, Kenya.
Credit: UN Photo/Evan Schneider

A cross-cutting agenda: Gender, climate change and conflict

Gender equality is crucial to achieve climate justice, to resolve conflict and to maintain peace. Many of the risks and vulnerabilities in the conflict–climate nexus have a clear gender component. Addressing them calls for gender mainstreaming and gender balancing, while highlighting the need for local solutions and capitalising on global opportunities for advancing resilience.

By Mayesha Alam

Gender equality is crucial for climate justice

Just as climate change is a cross-cutting issue, so too is gender equality. Gender equality is crucial to achieve climate justice, to resolve conflict and to maintain peace. In Africa and beyond, communities face social, economic and political pressures associated with our changing climate.

Since the adoption of UN Security Council Resolution 1325 in 2000, governments have progressively acknowledged that protecting women's rights and promoting the participation of women alongside men in conflict resolution is vital to international peace and stability.

These understandings help us to recognise that advancing gender equality must be at the heart of policies and programmes to improve climate adaptation and the resilience of communities to natural and human-induced disasters worldwide. This is as much about enhancing the effectiveness

of international and local efforts as it is about protecting and promoting human rights. To that end, I call for strengthening "gender mainstreaming", which refers to the integration of perspectives, expertise, needs and aspirations of both men and women in policy design and implementation, as well as ensuring "gender balance", which refers to the equal representation and participation of men and women in all processes.

Gender equality is crucial to achieve climate justice, to resolve conflict and to maintain peace

Gender and vulnerability in the climate–conflict nexus

Both climate change and violent conflict exacerbate gender inequalities. The overlap between climate change and conflict produces a myriad of vulnerabilities that differentially impact men and women (Alam, Bhatia and Mawby, 2015). Two interrelated areas of risk are (1) migration and forced displacement and (2) sexual and gender-based violence or abuse.

Women and children constitute the overwhelming majority of the some 71 million refugees, internally displaced persons, and asylum seekers worldwide. (Rogers et al., 2019) Today, there are more people displaced than ever before in recorded history, and three of the top five origin countries are in Africa: Sudan, South Sudan and Somalia (UNCHR, 2017). While many factors contribute to migration, the risk of displacement due to climate change and natural disasters increased multifold in the last fifty years (UNHCR, 2018). Yet, today's international legal architecture and policy frameworks are sorely inadequate for dealing with climate change-induced displacement.

People who migrate across borders in response to soil erosion, drought and other climate-related extreme weather events or disasters cannot seek asylum under the 1951 UN Refugee Convention. That Convention recognises refugees only as those fleeing persecution based on their race, religion, nationality or membership in a social or political group.

Low-lying countries across the world are especially susceptible to land loss caused by rising sea levels. This forces people to migrate inland and foments conflict over land and natural resources. In the Global South, the impacts of climate change all too often transect poverty, violence and discrimination. This is the case, for instance, in northern Nigeria, where extremist groups like Boko Haram have significantly disrupted communities by recurrently targeting women and girls (Vivekananda et al., 2019).

Research demonstrates that the convergence of armed conflict with climate-induced natural disasters heightens the incidence of sexual and gender-based violence. In Kenya, for example, women's health, economic well-being and physical safety suffered when drought intensified ongoing pastoralist conflicts. In this case, women – who are predominantly responsible for fetching water and fuel across Africa – faced much longer daily treks, which increased their exposure to illness and injury. At the same time, families were much more likely to marry off girls to ease the economic burden inflicted by crop failure and livestock losses, while women's desperation to survive and provide for their family worsened their vulnerability to sexual exploitation and abuse (UNDP, 2011: 16).

Displacement augments both men's risk of being trafficked for labour and women and girls' risk of being trafficked for sex. Displacement heightens the health risks that face women and girls, particularly new and expectant mothers. In the aftermath of cyclone Idai, which struck Mozambique, Malawi and Zimbabwe in March 2019, pregnant women and girls were left without basic hygiene and sanitation; this significantly undermined their ability to give birth safely (UNFPA, 2019). Despite these and other ways in which gender inequality transects climate change, conflict and displacement, it is important to remember that men can also be victims, just as women can also be agents. It is therefore salient to refrain from essentialising men and women as homogeneous categories, but rather to mainstream gender into analyses and actions.

Promoting the participation of women in conflict resolution is vital to international peace and stability

In this regard, some promising developments are underway to advance gender equality in addressing climate change. Despite the slow progress to date in understanding and responding to the relationship between gender, climate change and conflict, some positive examples of local, national and global solutions point to potential opportunities for further action.

Civil society-led grassroots initiatives

At the local level, several innovative initiatives in various African contexts are combining efforts to tackle gender inequality with initiatives to adapt to and mitigate the effects of climate change. For example, the Green Belt Movement, established by Kenyan Nobel Peace Laureate Wangari Mathaai, has worked to promote gender equality as part of environmental sustainability since 1977. The focus is on land tenure, agricultural production, tree planting, soil health and water storage.

> **Civil society-led grassroots initiatives make measurable differences in the communities they serve**

Another initiative is Ghana Bamboo Bikes. Led by female entrepreneurs, it creates jobs for women in a sector traditionally dominated by men. At the same time it provides a low-cost transportation option for rural men and women, reducing dependence on fossil-fuel run motorised vehicles.
Solar Sister is another example. This initiative has reached 1.6 million people across Africa by harnessing technology and training women to sell household items that run on renewable resources. Examples are clean cookstoves, solar lamps and other clean energy products. This contributes to reduce both energy poverty and greenhouse gas emissions from the burning of firewood or coal – while it also protects families against respiratory diseases caused by inhaling noxious gases.

Such civil society-led grassroots initiatives are commendable and make measurable differences in the communities they serve. However, they cannot take the place of national and regional efforts.

Broader, more macro-level initiatives

Recognising the importance of gender mainstreaming and gender equality, African countries including Egypt, Liberia, Mozambique, Tanzania and Zambia have adopted Climate Change Gender Action Plans in the last decade (Babugura, 2019). While others are set to follow suit, it is important to remember that implementation is key to effectuating change.

Under the UN Framework Convention on Climate Change (UNFCCC), a Gender Action Plan was established in 2017. That Plan aims to improve gender mainstreaming within the UNFCCC's work, again highlighting the overlap between climate change, violent conflict and displacement.

Despite this recent progress, however, women continue to be underrepresented in the political and scientific teams focused on climate change and violence. Indigenous populations and members of minority groups are likewise marginalised. The UNFCCC recently raised concern about the vulnerability of and violence against gender non-conforming and LGBT+ persons, as they too have been largely excluded from decision-making processes (UNFCCC, 2017).

It is important to ensure that national and regional processes link up with and feed into global efforts. The UN's Sustainable Development Agenda recognises gender equality as essential to achieving prosperity. It also places unprecedented focus on environmental protection and conservation as critical for growing economies and securing peace. With the 2030 deadline for countries to meet the Sustainable Development Goals fast approaching, mainstreaming gender into climate change resilience, poverty alleviation and peacemaking efforts is becoming more and more time sensitive.

Adverse impacts clearer with each passing day

The heightened risks and adverse impacts associated with climate change are clearer with each passing day. However, we have yet to arrive at an adequate understanding and response to the gendered dimensions of climate-related natural disasters, armed conflict and forced displacement. The next decade will be crucial, not only for building climate change resilience, but also for mediating conflicts that transect environmental disasters and mass migrations stemming from the loss of safe and sustainable livelihoods. What actionable steps can we take now to address these urgent challenges? Here, four areas of future work can be considered key.

1. First is *research*. Though scholarly works and policy reports increasingly highlight gender, much more research is needed to understand the relationship between gender, conflict and climate change. Collecting, sharing and paying attention to gender-disaggregated data is essential for evidence-based decision-making to address climate change and conflict. Future research should document, investigate and analyse both impediments and opportunities for change. To close knowledge and implementation gaps, scholars and practitioners must collaborate and make concerted efforts to build up qualitative and quantitative data on the climate–conflict nexus.

2. Second is *investment*. It is difficult to overstate the need for greater investment in, recognition of and support for local civil society initiatives focused on gender, climate change and conflict. Also vital is to develop national budgets that consistently and adequately allocate

spending power for gender mainstreaming in addressing climate change and conflict. Responsibility for expanding such investment lies not only with national governments and foreign donor agencies but also, crucially, with the private sector. Companies can and should do more to tackle gender inequality, human rights abuses and conflict as part of how they do business. This includes boosting the resources and human capital they dedicate to gender-sensitive environmental protection.

3. The third area is *inclusion*. Diversifying national climate delegations is a first step towards integrating a variety of perspectives into decision-making and problem-solving. Improving representation and inclusion at the international and national levels is the responsibility of governments and multilateral organisations. Processes should include and uplift marginalised segments of society.

4. Fourth is *cooperation*. Climate change is a global issue that knows no boundaries. This means that the only way to advance gender equality to address climate change and climate-related conflicts and displacements is by bolstering cooperation across sectors and industries, forging connections between academics and practitioners, and building partnerships within and across regions.

Further reading

Alam, M., Bhatia, R. and Mawby, B. 2015. *Women and climate change: Impact and agency in human rights, security, and economic development*. Washington, DC: Georgetown Institute for Women, Peace and Security. https://giwps.georgetown.edu/resource/women-and-climate-change/

Babugura, A. 2019. *Gender equality in combatting climate change: The African context.* Policy Briefing: Women, Power and Policymaking. Africa Portal August. https://www.africaportal.org/publications/gender-equality-combatting-climate-change-african-context/

Rogers, Lucy et al. 2019. *Displaced people: Why are more fleeing home than ever before?* BBC News. https://www.bbc.com/news/world-49638793

UNDP. 2011. *Disaster-conflict interface: Comparative experiences*. New York: Bureau for Crisis Prevention and Recovery. https://www.undp.org/content/undp/en/home/librarypage/crisis-prevention-and-recovery/DisasterConflictInterface.html

UNFCCC. 2017. Decision 3/CP.23: Establishment of a gender action plan. *FCCC/CP/2017/11/Add.1.* Lima: Subsidiary Body for Implementation. https://unfccc.int/topics/gender/workstreams/the-gender-action-plan

UNCHR. 2018. *Part II: Global compact on refugees*. New York: General Assembly Official Records. https://www.unhcr.org/gcr/GCR_English.pdf

UNCHCR. 2017. *Global trends: Forced displacement in 2016*. Geneva:. https://www.unhcr.org/5943e8a34

Vivekananda, J. et al. 2019. *Shoring up stability: Addressing climate and fragility risks in the Lake Chad region*. Berlin: Adelphi. https://shoring-up-stability.org/

Other references

Weerasinghe, S. 2018. *In harm's way: International protection in the context of nexus dynamics between conflict or violence and disaster or climate change.* Geneva: UN Refugee Agency. https://www.unhcr.org/5c1ba88d4.pdf

IUCN. 2019. Gender and Environment Resource Center. https://genderandenvironment.org/knowledge-center/?filter=ccgap

UN Women and Mary Robinson Foundation – *Climate Justice. 2013. The full view: Advancing the goal of gender balance in multilateral and intergovernmental processes.* New York: United Nations Entity for Gender Equality and the Empowerment of Women and Mary Robinson Foundation – Climate Justice. https://www.mrfcj.org/pdf/2013-06-13-The-Full-View.pdf

UNFPA (United Nations Population Fund). 2019. *Catastrophic cyclone Idai leaves pregnant women vulnerable in three countries*. News. 25 March. https://www.unfpa.org/news/catastrophic-cyclone-idai-leaves-pregnant-women-vulnerable-three-countries

About the author

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Renaissance Dam in Ethiopia
Photo: Middle East Monitor

Water scarcity and conflict: Not such a straightforward link

Water insecurity is increasing worldwide. This raises the chance of competition, conflict and instability in communities, countries and regions everywhere. In response to the challenges, the Water, Peace and Security (WPS) Partnership designs innovative tools and services to identify emerging water-related security risks. The aim is to foster dialogue and early targeted action to prevent or mitigate crises.

By Susanne Schmeier, Jessica Hartog, Joyce Kortlandt, Karen Meijer, Emma Meurs, Rolien Sasse and Rozemarijn ter Horst

The issue in the headlines

Conflicts around water are increasingly in the headlines: clashes between farmers and herders in the Horn of Africa, disputes over large dam projects in Central Asia and the Nile River Basin, violence in the Lake Chad region, and state fragility in Iraq and Iran (driven at least in part by water issues). These examples show some of the many ways that conflict can arise around water and how water can trigger or exacerbate conflict, acting as a "threat multiplier".

Numerous policymakers from national governments, regional organisations and international institutions have underlined the risks associated with conflict due to water scarcity. Many have called for targeted action to counter the threat. The media, too, has picked up on this issue. Journalists point out – often in alarmist terms – the perceived direct links between water scarcity (and other climate change-related water challenges) and violence and instability. Some even suggest that water wars between countries are just around the corner, or that the world will soon be at war over water.

Think tanks and research institutions have intensified their investigations of the role of water in conflicts. This interest is driven by the realisation that climate change will likely aggravate this complex relationship. The widespread attention to water's role in conflicts has led to growing concern, not least in the context of burgeoning migration.

Water and water-related challenges do not necessarily and inevitably lead to disagreements, conflicts and insecurity

However, the heightened – at times apocalyptic – concern often misses the bigger picture. Water and water-related challenges do not necessarily and inevitably lead to disagreements, conflicts and insecurity. The links between water and conflict are far more complex, diffuse and dependent on a number of intervening factors. It is this mix that determines whether, how and to what extent water-related risks indeed become security issues, for example, intensifying conflict or sparking destabilising migration.

That means action can be taken to reduce water-related risks. Well-considered and targeted actions can potentially avert conflicts, ensuring that the feared vicious cycle between water-related risks and conflict and insecurity does not emerge. We need to shape water challenges into virtuous cycles of water cooperation and water-based peacebuilding. This is where the WPS Partnership comes into play.

The WPS Partnership

The WPS Partnership develops innovative tools, approaches and services to understand the origins of water-related security risks and their implications for conflict and insecurity. It designs actions that can be taken in a timely, targeted and effective manner to mitigate risks and prevent or reduce negative outcomes.

Addressing water-related challenges requires, first and foremost, an understanding of the links between water and conflict. Where and how do water and security issues intersect, and how do their connections play out?

Water-related risks

Water-related risks concern, for example, whether water is too scarce, too unreliable, too abundant or too dirty. If so, why? Who, or what, has access to sufficient and clean water, and who is deprived? Water availability depends on hydrological factors, and can change due to natural conditions over time. People's use of water for livelihoods and other activities can change as well. While water scarcity can be caused by natural conditions, such as drought cycles, it is often created or at least worsened by over-abstraction, unsustainable land use, deforestation, intensified irrigation and modification of ecosystems (leading to deterioration of the services ecosystems provide).

Pollution – from households, industry or agriculture – is another factor that can deteriorate water availability, as it can make water unfit for use. It can even affect regions with otherwise abundant water resources.
Changes in water availability, particularly water scarcity, increase competition between water users, making conflict more likely. In the Inner Niger Delta, for instance, farmers, herders and fishers compete for increasingly scarce water and land resources. Infrastructure development upstream is set to that increase competition further, which is likely to result in even more limited water availability and shifts in water use patterns.

Addressing water-related challenges requires an understanding of the links between water and conflict

In India, drought has triggered serious conflict between water users at the local level, many of whom depend on water for their livelihoods. Conflict has also emerged between Indian states, as they too compete for water and related development opportunities.

Similarly, in Iran, consecutive droughts and overuse of limited resources have led to severe water scarcity, retreating groundwater levels and the drying out of riverbed wells. Conflicts between users are common in Iran, both between urban and rural areas and between provinces. Internal migration is also on the rise due to farmers having to abandon their lands in search of other economic opportunities.

The dependence of individuals, societies and states on water resources varies within and across societies. Some are more vulnerable than others. Their vulnerability affects the likelihood and the extent of conflict. What options do people have to counter water-related risks? Local responses to changes in, for instance, water availability vary. They are determined largely by people's ability to cope with change, which itself has numerous determinants. Thus, whether and to what extent conflict erupts

when water is scarce, is also dependent on numerous factors. To better understand and anticipate water-related conflicts, the WPS Partnership collects, processes and analyses vast amounts of water-related data globally: data on precipitation, on drought events, on reservoir levels and on the development and impacts of water infrastructures. The WPS Partnership also collects data on social, economic, political and demographic conditions. It uses these to gauge underlying vulnerabilities to water stress. These data are updated every three months in order to predict water-related conflicts in the near future.

The WPS Partnership also deploys hydrological tools, group model building, human responses to change, and conflict analysis and sensitivity methods. These allow it to conduct more detailed, in-region analyses together with local stakeholders. Such analyses feed into dialogue processes and help local stakeholders and decision-makers identify potential risk-mitigating solutions. Data and dialogue are crucial for developing conflict-sensitive plans to help prevent crises from erupting.

Conflict caused by water-related risks

A second dimension that needs to be understood is conflict as a consequence of water-related risks. The disruptions that the WPS Partnership seeks to avert in cooperation with local stakeholders go beyond violent conflict and include other forms of human insecurity and socially destabilising outcomes. Large-scale losses of livelihood, mass migration and famine are just a few examples. These can amplify disputes between rival ethnic groups and delegitimise local or national governments, leading to the related risk of state failure. They can enable violent groups to emerge, be used to justify acts of terrorism, or trigger deterioration of diplomatic relations between states.

In the Nile River Basin, for instance, Ethiopia's development of the Grand Ethiopian Renaissance Dam in a shared upstream basin has raised concerns in Egypt (downstream) about impacts on its own water use opportunities. Egypt has registered formal protests against the project. The wrangling has already led to verbal threats from policymakers on both sides and in the largely state-run media.

In Syria, some researchers assert that internal migration, political instability and civil strife were triggered in part by multiple years of severe drought, against a backdrop of unsustainable water use associated with the country's food self-sufficiency policies. This caused farmers to migrate en masse to urban areas, where they met spiking food prices. Research has sought to clarify the exact role water scarcity played in unleashing the Syrian civil conflict. This shows the importance of studying water's role in conflict and cooperation, to understand the complexities.

In contrast to earlier research findings, conflicts over water seem to play out at the national and subnational level, rather than at the international level. At the international level, actors are far more likely to solve conflicts in a cooperative manner, avoiding violent clashes. At the national and subnational level, violent conflicts related to water occur more often, leading to insecurity more broadly.

The WPS Partnership contributes to better understand water-related insecurity and conflict by analysing a range of conflict-related data and linking it to water, relying on global and regional datasets as well as in-depth case studies of specific regions. Localised analytical tools, for instance, are an important entry point to start informed discussions with concerned stakeholders over the different types of conflict as well as possible responses.

Water-related risks even lead to cooperation in some conditions

How water-related risks and conflict are actually linked

As a third dimension, it is critical to understand how the first two dimensions – water-related risks and conflict – are actually linked. This is a prerequisite for understanding in what circumstances water-related risks do or do not lead to conflict. Water-related risks can even lead to cooperation in some conditions. Clarifying these various pathways can help us turn vicious cycles into virtuous ones.

Yet, the links are never straightforward. They meander along various intervening factors in the broader regional socio-economic and political context. The following are some examples of these intervening factors, both water and non-water related, which the WPS Partnership seeks to identify and analyse:

- The specific geographic and hydrological conditions in a region, as for example, semi-arid and arid regions face very different challenges than the tropics or subtropics
- The dependence of a community, country or region on (external) water resources for survival and socio-economic development
- The number and variation of actors and interests involved in water resources, and their impacts on water resources
- The technical, human and financial capacity available to deal with water-related challenges and to mitigate negative human, economic and social impacts of, for instance, short-term water scarcity
- Marginalisation of certain groups
- Political system fragility, including the legitimacy of leadership and governance capacity

Analysing the challenges

Analyses by the WPS Partnership have found that it is the capacity of societies to deal with changes in water resources (such as changes in availability) that predetermine the likelihood of conflicts occurring. How dependent, for instance, is a society on water resources for socio-economic development and thus its overall well-being? What capacity does it have to hedge against water risks? What is the quality of its existing water management system, including relevant human, technical and financial capacities? Do communities have established formal or informal mechanisms to peacefully address disagreements? Does the government have the population's trust to deal with water-related issues – and indeed to conduct overall international relations with neighbouring states?

In Iraq, for instance, deteriorating water quality and therefore reduced water availability sparked protests in the city of Basra and elsewhere in 2018. Likewise, reduced flows of the Tigris and Euphrates rivers, due to water management measures in Iraq and water use and development upstream in Turkey, Syria and Iran, have made it increasingly difficult to supply water to cities and agriculture. This has generated dissatisfaction with government services and forced people to leave their homes and farmlands and migrate to other parts of the country or beyond. In combination with the overall challenging security situation, this has cast a shadow on the Iraqi government's legitimacy, providing fertile grounds for full-fledged water conflicts to emerge.

However, other avenues are possible. Evidence shows that even in settings where many factors indicate a high likelihood of competition, disagreement or conflict, alternatives are possible. Water can provide a basis for cooperation, even beyond the water sector. In the Colorado River Basin, for instance, numerous factors – diminishing rainfall, frequent droughts and increased water use due to population growth and farmland expansion – hint at a high risk of conflict among different user groups. Yet, despite regular disagreements between the different US states and between the United States and downstream Mexico, the situation has never seriously erupted. Instead, cooperative approaches have been established and developed over time. These include an international agreement on basin management between the United States and Mexico setting out technical cooperation mechanisms for specific water resources management issues (such as the Colorado Drought Contingency Plan signed by both nations), as well as local community engagement.

Similarly, in the water-scarce Orange-Senqu Basin of southern Africa, recurrent droughts, together with growing populations and increased water use for socio-economic development, have not led to conflicts between the riparian states. Instead, Lesotho, South Africa, Botswana and Namibia have intensified cooperation via the Orange-Senqu River Commission (ORASECOM). This has led, for instance, to the countries' decision to mandate ORASECOM to carry out feasibility studies, paving the way for extending an existing water sharing and transfer arrangement and related infrastructure.

What really matters: Preventing, mitigating and resolving water-related conflicts through dialogue

Conflicts, particularly conflicts related to water, exact a significant human, political, economic and social toll. Policymakers around the world acknowledge the need to counter the potential for water insecurities to drive conflicts. Ideally, well-considered and targeted actions need to be taken as early as possible, so that conflicts can be prevented rather than resolved.

Whether water-related challenges trigger or exacerbate conflicts depends on the resilience of the countries involved, as well as the effectiveness and legitimacy of their governance systems and their ability to peacefully address discontent and disputes. It won't be enough to supply technical solutions – like constructing additional storage capacity to deal with rainfall variability. Such solutions may even escalate disputes, especially if they are not designed in a conflict-sensitive way. Groups that feel marginalised might not

The Colorado River basin, photo by Jeff Llerena, Flickr.

feel that their needs and interests are acknowledged and met. This raises the need for inclusive processes that involve potentially conflicting parties in shaping solutions. Carefully and skilfully structured dialogue processes can transform water from a potential source of conflict into an instrument of cooperation. That dialogue needs to take place at different governance levels, aligned with the exact nature of the conflict – from the local to the provincial, national, regional or global level – in an integrated and multi-level manner.

In most cases, the dialogue will also need to be cross-sectoral. Both agriculture and energy, for example, are key drivers of water challenges and also the most vulnerable sectors to the impacts of water scarcity. Other sectors, too, can contribute towards increased resilience of communities or help reinstate the rule of law, removing incentives for undesired behaviour.

Water can provide a basis for cooperation, even beyond the water sector

To identify effective solutions that do justice to the complexity of water-related conflict, dialogues need to be informed by a mix of locally grounded expertise in water management, socio-economic development, conflict prevention and resolution, as well as peacebuilding. Multidisciplinary cooperation is therefore of utmost importance to identify the various root causes of conflict and linkages between water and conflict and to develop adequate responses.

Given the complexity of the topic, comprehensive capacity building is called for of those involved in the prevention, mitigation and resolution of water-related conflict. Embedding capacity building into dialogue processes can help level the playing field between different stakeholders, creating a setting in which participants feel comfortable sharing their thoughts. Establishing a joint appreciation of the problem is vital to allow for better analyses of the status of water resources and their role for different actors in society. This helps us understand the origin of competition over water, the links between water and wider conflict dynamics, and the most beneficial solutions for all involved.

The WPS Partnership in action

The WPS Partnership's engagement in Mali highlights the importance of combining a dialogue process with capacity building. Here, dialogue is carefully linked to existing projects supporting cooperation and stability. Capacity building is based on a sound understanding of the interests and strategies of the stakeholders as well as the water resources system and its importance in society.
The process involves actors at the local level who represent different water user groups. In Mali's Inner Niger Delta, they include farmers, herders and fishers. At the national level, representatives of different ministries are involved, including agencies responsible for security. At the international level, participants include external actors active in water management, stabilisation and peacebuilding in Mali.

The Mali example demonstrates that a successful multi-stakeholder dialogue process needs to be based on a sound and shared understanding of the issues at stake. The current status of water resources has to be known, and how water is used by different actors. Are any changes planned in water resources use? If so, what impact could these have on existing structures? What options do the different stakeholders have to respond to the current or future situation, including changing their livelihoods, migrating to other parts of the country or abroad, joining violent or terrorist groups, or taking up other socio-economic opportunities?

This is where the WPS Partnership's combination of cutting-edge analytical tools comes in: to understand the links between water and conflict, to identify opportunities for participatory development, and to generate inclusive and informed dialogue for practical, collaborative and conflict-sensitive solutions.

While water seems inseparable from competition, disagreement and potential conflict in many parts of the world, ample evidence indicates that water-related conflict can be prevented, mitigated or resolved. The WPS Partnership has analytical tools to understand water-related challenges and offers a proven approach to address these challenges in a timely and targeted manner. Its work proves that multi-stakeholder dialogue processes can turn vicious cycles of conflict into virtuous cycles of development.

About the authors

The authors are affiliated with the WPS Partnership, a collaboration of organisations supported by the Netherlands Ministry of Foreign Affairs. Current partners include IHE Delft Institute for Water Education (lead), the World Resources Institute, Deltares, The Hague Centre for Strategic Studies, Wetlands International and International Alert. Associate partners are New America, Oregon State University and the Pacific Institute.

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A rendering of the proposed Great Green Wall of Africa. Photo: thehigherlearning.com

Elements of change: Climate and conflict in Africa

Climate change is a global phenomenon that affects all life on earth. For the first time ever, the entire planet is undergoing a singular climatic transformation. Globally, land has already warmed 1.5°C and, owing to past greenhouse gas emissions and inertia in the climate system, the earth and its atmosphere will continue to warm until around mid-century, even if all emissions stopped today. Unprecedented heatwaves, food shortages and extreme storms will likely hit us before 2030 and intensify with further warming.

By Lily Welborn

Projections for Africa are dire

The immediate gravity of climate change varies dramatically across the world. For people unable to employ any of the strategies previously used, be it moving north, turning up the air conditioning or bracing their homes for hurricane winds, this is a life-threatening prognosis. In general, those who are most vulnerable to climate change are people who are very poor or in conflict-affected environments and physically exposed to droughts, cyclones, rising sea levels or other impacts.

The entire planet is undergoing a singular climatic transformation

Africa is home to more than half of the global extremely poor population, many of whom depend on rain-fed agriculture and endure some of the hottest climates on earth. This population is projected to grow from the current estimated 460 million to nearly 600 million people by 2040, before beginning to decline, according to the International Futures (IFs) modelling platform housed at the Frederick S. Pardee Center for International Futures of the University of Denver.

Projections of further climate impacts in Africa are dire. Although a climatically diverse continent, home to the expansive rainforests of the Congo Basin and the snowy peaks of the Drakensberg mountains, most of the continent is hot and dry. Temperatures in Africa will rise

faster than the global average, and most of the continent will continue to become more arid, although Central and Eastern Africa will experience heavier rainfall, especially after mid-century.

> **There is insufficient evidence to prove that climate change directly causes conflict**

By undermining the food and water security of many vulnerable populations in Africa (and elsewhere in the world), climate change has already added a frightening and unpredictable element to conflict. Although the frequency and intensity of conflicts in Africa have been easing for decades, the spectre of resource scarcity looms large.

The climate–conflict nexus

That climate shocks and resource scarcity provoke conflicts – be they civil or international – seems an intuitive conclusion. This narrative has seen studies blaming rising temperatures for Africa's civil conflicts and drought for Syria's civil war.

But, the nuanced and growing literature on the relationship between climate change and conflict makes two points clear. First, there is insufficient evidence to prove that climate change directly causes conflict. In fact, Africa's civil conflicts over the past half-century show no clear correlation with climatic conditions. Evidence points instead to the usual structural culprits: politicised marginalisation of certain ethnic groups and poor governance and economic performance. These socio-economic dynamics are far more robust drivers of conflict than any climatic phenomenon, no matter how disruptive.

Second, the argument that climate change has caused the world's conflicts is not only incorrect, but inadvertently absolves those actually responsible. Let us not use this line of reasoning to help the culpable governments, organisations and individuals shirk their responsibility for the suffering people have endured.

However, these findings do not negate the impacts of climate change on the nature and intensity of conflicts. Diminishing water resources, hotter temperatures, droughts and storms are threatening the systems of cooperation and ecological services that people everywhere depend on to survive.

Caring better for our ecosystems

We have to care better for our ecosystems to minimise the threat that climate-related conflict poses to vulnerable populations. A large and growing number of studies showcase the astonishing success of ecosystem-based strategies to sustainably provide food, water and income security while building resilience for the future.

Often termed "ecosystem-based" or "farmer-managed natural regeneration", these approaches recover and sustain ecosystems vital to human life. This idea is so simple it seems obvious, but apparently this is far from true. In many of the worst cases of desertification, decades, if not centuries, of razing land for cash crops has rendered barren previously resilient landscapes.

Farmer irrigating vegetables in Mali. Credit: IFPRI

Ecosystem-based strategies are flourishing in the Sahel, the semi-arid belt that hugs the southern border of the Sahara Desert and stretches from Senegal to Eritrea. Thanks to geographic realities, people living in the Sahel suffer temperatures 50% higher than the global average and will experience unprecedented climates before anyone else on earth. Yet, Sahel farmers and herders' traditional practice of growing endemic tree species has produced extensive parks of baobab, winter thorn and shea butter trees in some of the previously most degraded landscapes on the planet.

> **The responsibility of the governments of developing countries in Africa and elsewhere to mitigate climate change will continue to expand**

In southern Niger, farmers have been regenerating certain tree species for nearly half a century. More than five million hectares is now covered with trees and, below them, crops. Thanks to the crops, wood and strengthened local governance offered by this system, the communities of this regreened region coped far better with the 2005 famine than other areas of Niger. Importantly, resident communities developed each strategy with careful regard for local environmental, social and political dynamics.

The way forward

Caring for ecosystems better is the key to creating a sustainable relationship between people and the ecosystem services we need to survive. As the climate continues to warm, the strength of this relationship will increasingly become the deciding factor between peace and conflict among vulnerable populations in Africa and elsewhere.

> **Whether the planet remains suitable for life after 2050 depends on world leaders**

Protecting shrub lands, forests, peatlands, wetlands and other ecosystems also has the dual purpose of mitigating further climate change. These ecosystems not only absorb atmospheric carbon dioxide, but also guard against soil degradation, erosion and other destructive phenomena.

And this will be necessary, as the responsibility of the governments of developing countries in Africa and elsewhere to mitigate climate change will continue to expand. Growing populations and rising incomes mean increased demand for energy, which in all too many cases will mean doubling down on the (usually) most viable solution: fossil fuels.

By 2050, Africa's energy demand is projected to match that of Latin America and the Caribbean. Fortunately, the cost of importing technology seems set to decline in the coming years, which may make renewable energy the best way to meet immediate development needs while mitigating future climate change. In the meantime, whether the planet remains suitable for life after 2050 depends on world leaders. Major international governing bodies and the governments of the United States, China, India and other highly industrialised countries must collaborate to cut greenhouse gas emissions now. There is no other way.

About the author

Lily Welborn is a researcher at the Institute for Security Studies in Pretoria, South Africa.

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