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CLIMATE CHANGE AND CONFLICT: LESSONS FROM DANIDA-FUNDED RESEARCH

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TABLE OF CONTENTS

Introduction.....	2
1. Local Conflicts over Natural Resources and their Links to Climate Change	4
2. Conflicts Associated with Land Tenure, Conservation and Commercial Interventions	5
3. Effects of Violent Conflict on Financing for Climate Change.....	8
4. Gender Inequality	10
5. Urbanisation Trends	10
Conclusion	11
Key Considerations for Climate Programming in Conflict Contexts.....	12

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Introduction

In recent years, there has been growing attention to the climate-security nexus. In 2021, the United Nation's Intergovernmental Panel on Climate Change (IPCC) highlighted the significant needs of communities facing climate change in fragile and conflict settings. Discussions at the COP28 summit (2023) also urged parties to make stronger commitments to financing climate action in fragile and conflict-affected contexts. A wide body of research identifies climate change as a 'threat multiplier' that, in combination with socio-political factors, intensifies violent conflict and poses significant risks to national and international security. Countries that experience violent conflict are simultaneously some of the most vulnerable to climate change but remain the least funded.¹

Since 2018, the Climate Security Mechanism has provided multidisciplinary support to Member States, regional organisations and UN entities to better understand the linkages between climate, peace and security. The Danish Government is also increasingly committed to supporting these objectives. One of the objectives of Denmark's strategy for development cooperation, 'The World We Share' (2021-2025), is to strengthen action to support climate change adaptation in the poorest and most vulnerable countries. In line with these objectives, development research is supported through Danish development cooperation within a number of thematic areas including climate change, conflict, peace and security and natural resource management.²

The overall objective of this meta-study is to synthesise and connect lessons and results from development research projects (FFU projects)³ into a more coherent body of knowledge on the intersection between climate change, insecurity, and conflicts. It combines emerging insights from eight Danida-funded projects, which includes research in Burkina Faso, Ghana, Ethiopia, Kenya, Mozambique, Myanmar, Somaliland and Tanzania (see Table 1 for more details). It draws on available research outputs from the selected projects and interviews with project leads and other connected researchers. Not all the selected projects have a specific focus on the conflict-climate nexus. However, as a collection, they offer lessons that can support the development of Denmark's policy and programming on climate change in conflict-affected contexts. While some of the projects are completed with a body of publications that this study draws on, others are in the early stages of their research and therefore rely on interviews only.

The policy brief based on this meta-study report can be found at the Danida Fellowship Centre website, see <https://dfcentre.com/research/>

This meta-study focus on three areas: 1) local conflicts over natural resources and their links to climate change; 2) conflicts associated with land tenure, conservation and commercial interventions; and 3) effects of violent conflict on financing for climate change. For each area, the study uses country-specific case studies to illuminate the dynamics. In addition, the meta-study highlights the distinct vulnerabilities of women and girls across different contexts and the importance of recognising urbanisation trends in conflict-affected regions. As a collective body of work, research from the selected projects shows that climate change is not a causal instigator of conflict, but feeds into existing dynamics and historical tensions. This includes, for example, historical and contemporary land alienation laws, policies and frameworks, which increase tensions over diminishing resources. Research across the projects shows the multidimensional character of the climate-security nexus, contingent on

¹ Chambers, J. and Kyed, H.M. 2024. 'Bridging the Gap in Climate Change Financing to Violent Conflict Affected Areas.' *DIIS Policy Brief*, May.

² On the Danida Research Portal, 17 different themes appear, see <http://drp.dfcentre.com/keywords/>.

³ The Danish Ministry of Foreign Affairs in collaboration with the Danida Fellowship Centre (DFC) fund collaborative research projects through a competitive application process. In this 'FFU modality', research projects are implemented as research collaboration projects between researchers at universities and research institutions in Denmark and in Denmark's partnership countries. See <https://dfcentre.com/research/>.

the specific socio-political context, particular conflict dynamics, the interplay of climate stressors, and the vulnerability and coping capacity of societies. The meta-study concludes that despite challenges of working in conflict-affected contexts, Denmark should take a global lead in adopting approaches that address climate change, development, and peacebuilding in an integrated manner from the outset of policy development and programming. It concludes, with a list of key findings to support tailored, adaptive and accessible climate financing.

Table 1: Project List ⁴

Project	Collaborating research institutions
Project 1. Access and Authority Nexus in Farmer-Herder Conflicts (AAN) (18-14-GHA) 2019-2024	Kwame Nkrumah University of Science and Technology (Ghana), University of Copenhagen (Denmark), the University of Development Studies (Ghana) and the University of Energy and Natural Resources (Ghana).
Project 2. Timber Rush: Private Forestry on Village Land (16-P02-TAN) 2016-2022	Sokoine University of Agriculture (Tanzania), Danish Institute for International Studies (DIIS) (Denmark) and University of Copenhagen (Denmark).
Project 3. Rights and Resilience in Kenya (RARE) (18-01-KU) 2018-2023	University of Copenhagen (Denmark), University of Nairobi (Kenya), Danish Institute for International Studies (Denmark), Roskilde University (Denmark) and the International Livestock Research Institute (Kenya).
Project 4. Building Resilience to Climate Change in Ethiopia: Exploring Options for Action (18-07-KU) 2019-2024	University of Copenhagen (Denmark) and the Ethiopian Development Research Institute (Ethiopia).
Project 5. Hierarchies of Rights: Land and Investments in Africa (14-05-RUC) 2015-2021	Roskilde University (Denmark), DIIS (Denmark), University of Eduardo Mondlane (Mozambique) and the University of Dar es Salaam (Tanzania).
Project 6. Climate Actions, Conflict and Peacebuilding (MyCClimate) (20-05-DIIS) 2021-2026	Danish Institute for International Studies (Denmark), Nyan Corridor (Myanmar), Chiang Mai University (Thailand) and the Highland Institute (Nagaland, India).
Project 7. Pastoralist Climate Change Resilience in Somaliland (PACCS) (21-04-RUC) 2023-2028	University of Southern Denmark, Roskilde University (Denmark), Danish Institute for International Studies (Denmark), the Social Research and Development Institute (Somaliland), the University of Hargeisa (Somaliland) and the University of Nairobi (Kenya).
Project 8. Climate Resilience Across the Rural-Urban Continuum (RURBAN) (20-11-KU) 2021-2026	University of Copenhagen, the International Institute of Environment and Development (UK), the International Institute of Water and Environment Engineering (Burkina Faso), the University of Joseph Ki-Zebero (Burkina Faso) and the University of Development Studies (Ghana).

⁴ Further information about each project can be found at the Danida Research Portal, see <http://drp.dfccentre.com/keywords/>.

1. Local Conflicts over Natural Resources and their Links to Climate Change

A growing body of international research shows that the link between climate change and security is indirect, non-linear and multi-dimensional. Across all research projects climate change is putting pressure on both rural and peri-urban livelihoods and, in some cases, amplifying or exacerbating pre-existing inter-communal tensions and conflict dynamics.⁵ However, they also suggest that focusing too strongly on climate-related factors as a cause of conflict has the potential to overshadow more fundamental issues underpinning violence and instability.⁶ These include past histories of violence, poverty and inequality, political marginalisation, weak governance and most importantly, access to land and natural resources.

The research in each of these projects builds off a growing body of inter-disciplinary literature, which documents the increasing pressure placed on agricultural livelihoods as a result of rising average temperatures, greater rainfall variability, and an increase in drought and heat stress, especially in arid and semi-arid areas. For people whose lives depend on natural resources which are climate sensitive, research shows that the pressure placed on traditional livelihoods is also leading to conflicts, especially in the Sahel and the Horn of Africa. Many countries in these areas are prone to extreme weather events and have been exposed to drought in recent decades, severely impacting people's food security. In many of the project's country case studies, competition over access to limited pasture and water resources as a result of prolonged drought and precipitation variability, also interacts with other drivers of inequality, leading to violence.

CASE STUDY 1: Climate Change Exacerbates Pre-existing Conflict Dynamics in Ghana

Research on the Access and Authority Nexus in Farmer-Herder Conflicts (AAN) (Project 1) in Ghana highlights the relationship between increasing incidences of violence and resource scarcity induced by climate change. In Ghana, farmers and herders have sometimes fought and sometimes cooperated over access to arable land and grazing in the area for centuries. However, researchers from AAN observe that climate change is exacerbating competition over resources and leading to increased conflicts in the middle belt as well as other parts of Ghana and neighbouring countries in the Sahel. As climate change puts pressure on traditional grazing lands and desertification in neighbouring countries, herders are increasingly moving south into territories owned by Ghanaian farmers to find food for their cattle. A broad body of work shows that movement by herders into Ghana increases incidences of conflict. Research from AAN shows that while some districts in the middle-belt of Ghana have tried to implement stronger policies that regulate the movement of herders to protect farmers (including shoot-to-kill cattle policies), it is difficult to monitor and, in some cases, has fuelled more violent conflict (Interview with AAN, 31 October, 2023).

Despite strong evidence that climate change is amplifying natural resource competition in the Sahel region, research from AAN in Ghana highlights the complexity of local conflicts. Herders have traditionally been members of the Fulani ethnic group who originated from present-day Burkina Faso, Mali and Niger in the early twentieth century. For many decades, Fulani people have been stigmatised in Ghana as non-citizens and faced state persecution, including operations aimed at expelling them. Many present-day conflicts have

⁵ See e.g. in Ethiopia Bekele, M., Bezabih, M., Elias, H., Fisker, P., Gebrehiwot, T., Kuma, T., Mekasha, T., Mekonnen, A., Tarp, F. and Hailemaraim, T. 2020. 'Building Resilience to Climate Change in Ethiopia: What do we Know so Far?' University of Copenhagen.

⁶ See e.g. in Somaliland Fadal, M., & Moe, L. W. 2021. *Collaboration, Conflict and Mobility: Local Responses to Climate Change in Somaliland*. Toda Peace Institute.

therefore become politicised along identity lines between so-called ‘foreigner’ Fulani herders and ‘native’ Ghanaian farmers (Interview with AAN, 31 October, 2023). Distribution, use and access to land and natural resources similarly sits along identity lines and marginalises herding communities. The ability of groups to participate in decision-making processes that affect their access to land and resources therefore feeds into contemporary conflict dynamics. The ongoing marginalisation of Fulani herders means they remain excluded from both climate-related initiatives and conflict resolution processes. The impacts of these farmer-herder conflicts also have gendered implications, since many smallholder farmers are women. When farms are destroyed by cattle, women’s livelihoods are often affected, but they also become victims of gender-based violence in the outbreak of conflicts (Interview with AAN, 31 October, 2023).

AAN researchers highlight the importance of working closely with both farmer and herding communities to contain the increasing incidence of conflicts (Interview with AAN, 31 October, 2023). In districts, where compensation policies have been put in place to support farmers whose crops are damaged by herders, preliminary evidence suggests that conflict is less likely to occur (Interview with AAN, 31 October, 2023). Furthermore, a project results-sharing platform created by AAN, which enabled farmers and herders to meet for the first time and discuss their concerns, showed the potential for reducing conflict through dialogue. AAN researchers suggest that local-led efforts to reduce conflict through dialogue need more funding and support. However, they suggest that the majority of climate-related funding in Ghana neglects conflict-prone regions, focusing instead on the implementation of agroforestry projects in more stable areas (Interview with AAN, 31 October, 2023). Indeed, AAN researchers observed that there are no common platforms in Ghana that simultaneously respond to conflict and support farmer/pastoralist adaptation to climate change. Rather than ignoring conflict hot spots, they argue that international climate-related funds should integrate alternative dispute resolution mechanisms to help address farmer-herder conflicts and ensure that vulnerable groups are not neglected. Research from the AAN project also highlights the importance of working with local chiefs to support fair arbitration processes, to help address the specific vulnerabilities of women and girls.

2. Conflicts Associated with Land Tenure, Conservation and Commercial Interventions

Across all projects, research shows that appropriation and regulation of land are major drivers of conflict at both local and national levels. The livelihoods of rural populations are threatened not only by climate change, but primarily by unequal distribution of resources, land acquisitions and political manipulation of property rights, which build off historical processes of violence and the legacies of colonial land dispossession.⁷ Across Africa and in Asian countries like Myanmar, an increase in land acquisitions or grabs over the last thirty years has been driven by neoliberal and investment-friendly development policies and institutions, which have led to land tenure formalisation, modernisation and commercialisation of agriculture and animal husbandry.⁸ These policies and institutes have had severe impacts on land access and control for both farmers and pastoralists.⁹

⁷ See e.g. Bluwstein, J., Lund, J. F., Askew, K., Stein, H., Noe, C., Odgaard, R., Maganga, F., & Engström, L. 2018. ‘Between dependence and deprivation: The interlocking nature of land alienation in Tanzania.’ *Journal of Agrarian Change*, 18(4): 806-830; Buur, Lars, J.J. Macuane, F. Maganga and R.H. Pedersen (Ed.). 2023. *Land, Rights and the Politics of Investments in Africa*. Elgar Publishers;

⁸ Buur et al. 2023.

⁹ See e.g. Bluwstein et al. 2018; Buur, L., R.H. Pedersen, M. Nystrand, and J.J. Macuane. 2019. ‘Understanding the three key relationships in natural resource investments in Africa: An Analytical framework.’ *The Extractive Industries and Society*, 6 (4): 1195-1204.

The privatisation of land reduces customary and communal lands, which communities have traditionally relied on. Individual land ownership also erodes customary social institutions and collective responses to resource scarcity.

Research from some of the selected projects demonstrates that climate change actions, including both mitigation and adaptation, can inadvertently contribute to conflicts by exacerbating historical trends of land dispossession. Interventions like forest and wildlife conservation, green energy projects, and adaptation-oriented changes to farming methods, which restructure the use and control of natural resources, often challenge vulnerable communities' access to land. Funding to support environmental conservation initiatives have grown as countries seek to meet nationally determined contributions (NDCs). Research from Kenya (Project 3) and Tanzania (Project 5), for example, shows that community-forestry, national parks, and wildlife conservation reserves contribute to land alienation of the most vulnerable groups, constraining and criminalising the livelihoods of nomadic and forest-dependent communities. Despite the rhetoric of community-based participation by conservation NGOs and their donors, many of these projects lead to evictions, entrench gender hierarchies and spur land and boundary conflicts.¹⁰

Pastoralists, who reside in over 21 African countries, are particularly vulnerable to both climate change and large-scale appropriation of land.¹¹ Research from Kenya (Project 3), Tanzania (Project 5), and Somaliland (Project 7) highlight a perception bias within national and international climate change financing which positions pastoralist livelihoods as backward, unsustainable and environmentally destructive. This bias can be seen in both government policy and international development programming, which contributes to further marginalise pastoralist communities and to increase tensions with government officials. Current funding models for mitigation largely prioritise market-based solutions to climate change through the expansion of carbon offsetting conservation schemes. However, there is growing evidence, which shows that the voluntary carbon market does not reduce emissions, but instead benefits corporations, at the expense of vulnerable communities, like pastoralists. While pastoralists have always faced political marginalisation, harsh climate conditions and violent conflict, their livelihoods are increasingly exposed to new risks such as wildlife conservancies, agro-businesses as well as large-scale wind and oil projects. This has also led to competition within and between communities and, in some cases, led to violent conflicts.

CASE STUDY 2: The Relationship between Land Rights, Conflict and Climate Resilience in Kenya

Research from the Rights and Resilience (RARE) project in Kenya (Project 3) examines the relationship between community resilience and land rights in the context of pastoral and agro-pastoral climate change adaptation in Kenya. The project highlights the increasing pressures facing pastoralist communities, over access to grazing lands and their ability to derive benefits from it. This builds off a growing body of research which documents the negative impacts to pastoralist communities as a result of discriminatory regulatory frameworks and land policies, which have sought to “individualise, sedentarise or decollectivize pastoralism tenure systems” throughout Sub-Saharan Africa.¹² Following on from colonial era land laws, national legislation has shown a distinct bias towards private property

¹⁰ Bluwstein et al. 2018, 826.

¹¹ Hassan, R., Nathan, I. & Kanyinga, K. 2023. 'Will community rights secure pastoralists' access to land? The Community Land Act in Kenya and its implications for Samburu pastoralists.' *The Journal of Peasant Studies*, 50(5): 1736; Wachira, J., Stacey, P. and Atela, J. 2020. 'Large Scale Land Acquisition and Pastoralists Climate Change Adaptation in Kenya.' *RARE Working Paper*.

¹² Wachira et al. 2020, 12.

regimes and a disregard for pastoralist livelihoods communal tenure.¹³ Research from RARE shows that many donor-led development interventions designed to support pastoralists to respond to climate change have also had detrimental impacts “due to a lack of understanding of the core rationale and dynamics of pastoral systems.”¹⁴

Misunderstandings about pastoral systems and local conflict dynamics also feed into the allocation of funds for climate change mitigation and adaptation activities. Land in Kenya is historically deeply contested and climate change has become embedded in long-standing conflicts over land. Research from RARE shows that conflicts also occur when different adaptation strategies collide, e.g. classic farmer/pastoralist conflicts become intensified or conflicts of interest between different wealth groups (Interview with RARE, 8 November, 2023). There are also growing tensions (which have become violent, in some cases) between different age groups who have different aspirations and ideas for land use. While there is increasing attention to addressing the issue of landlessness for pastoralist communities in Kenya through law and policy reform, research by RARE shows that focusing on the formalisation of communal land title does not automatically lead to benefits for the most vulnerable people nor reduce rates of conflict. In some areas, for example, the recognition of communal lands by state officials has produced violent contestations over which people belong to them. In other areas, state officials do not take the new community land laws very seriously, creating inter-generational and intra-household conflict (Interview with RARE, 8 November, 2023). Instead, new land laws and legislation in Kenya deepens patterns of inclusion and exclusion, creating new categories of landless people without access to food security (e.g. divorced women and widows).¹⁵

Research from RARE highlights the need to recognise the importance of pastoralists’ livelihoods as part of the solution to climate change. Unlike high impact industrial livestock systems, which are damaging to the environment and contribute to methane emissions, pastoralist livelihoods are relatively low impact and have the potential to enhance biodiversity and offer a low-carbon alternative. Furthermore, as climate change sees increasing temperatures and high levels of seasonal variability and volatility, it is important to recognise how pastoralists are able to respond to uncertainty and adapt in new ways. Despite the vulnerability of pastoralist communities and their traditional livelihoods in Kenya, research from RARE shows the heterogeneous strategies households are already putting in place to “actively adapt” both to climate change and rapid land use transformations.¹⁶

A close reading of evolving adaptation strategies of pastoralists demonstrates the creative and diversified livelihood strategies that pastoralists are adopting as a response to these intersecting processes.¹⁷ Rather than positioning pastoralists through simplistic narratives, researchers from RARE argue that climate change programming should support localised adaptation strategies, which recognise pastoralist livelihoods as “dynamic and evolving”,¹⁸ including diversification strategies, which include non-livestock incomes. Moreover, programming should also recognise the diversity of aspirations and adaptation strategies of pastoralist communities, including shifts across age and gender, which are seeing more women and youth move towards sedentary lifestyles (Interview with RARE, 8 November, 2023).

¹³ Odote, C., Hassan R., and Mbarak, H. 2021. ‘Overpromising While Under Delivering: Implementation of Kenya’s Community Land Act.’ *African Journal on Land and Geospatial Sciences* 4 (2): 292-307.

¹⁴ Wachira et al. 2020, 13.

¹⁵ Hassan et al. 2023, 1752.

¹⁶ See also Bekele, M., Bezabih, M., Elias, H., Fisker, P., Gebrehiwot, T., Kuma, T., Mekasha, T., Mekonnen, A., Tarp, F. and Hailemaraim, T. 2020. ‘Building Resilience to Climate Change in Ethiopia: What do we Know so Far?’ University of Copenhagen; Rotich, S.J., Funder, M. and Marani, M. 2023a. ‘Suburban Pastoralists: Pastoral Adaptation Strategies at the Rural-Urban Interface in Nairobi, Kenya.’ *Pastoralism: Research, Policy and Practice*, 13 (6): 1-16.

¹⁷ Rotich et al. 2023a; Rotich, S.J., Funder, M. and Marani, M. 2023b. ‘Supporting Pastoralist Adaptation to Climate Change in Kenya: Beyond a “One-Size Fits All” Approach.’ *RARE Policy Brief*, 29 Nov.

¹⁸ Rotich et al. 2023a, 4.

3. Effects of Violent Conflict on Financing for Climate Change

People living in fragile and violent conflict settings are three times more affected by climate extremes than those in other countries yet receive the least climate funding.¹⁹ While there is increasing global policy attention on the need to prioritise climate funding for countries experiencing violent conflict, research in Myanmar (Project 6) and Somaliland (Project 7) confirm that adaptation and mitigation initiatives are severely lacking and that communities are struggling to cope due to the combined effects of climate change and conflict.

Research in Myanmar and Somaliland highlights the need for more flexible funding arrangements directed at non-state actors in contexts with violent conflict.²⁰ Research in Somaliland, for example, shows that both violent conflict and drought events in recent years have led to high levels of humanitarian need and human displacement.²¹ However, the Somaliland government and local organisations lack the opportunities and resources to support local adaptation initiatives and the diversification of livelihoods due to low climate financing (Interview with PACCS, 9 November). Part of this lack of funding is embedded in the UN system, its influence on the international development sector and the fact that most global climate financing gets channelled through states. Given that Somaliland is not recognised by the UN as a state, this poses severe challenges, with most funding channelled through the Federal Government of Somalia instead. Research from Myanmar also shows that instead of being constrained by state-based solutions, climate financing should target assistance at local civil society organisations, environmental groups and non-state organisations who have an existing track record of working with communities on the ground and in-depth experiences with environmental protection.

CASE STUDY 3: Significant Funding Shortfalls for Community-Led Climate Initiatives in Myanmar

Research by MyCClimate (Project 6) examines the linkages between climate change (in)actions and conflict dynamics in Myanmar. In Myanmar, international climate change funding through the state has been severely curtailed after the military staged a coup in February 2021, instituting a junta that is not recognised by the UN due to its brutalities against the civilian population. The situation in Myanmar raises an important question about whether the UN and donor organisations should rethink their state-centred financing for climate change initiatives, especially in the cases of illegitimate and violent military regimes.²²

In the 2021 Global Climate Risk Index, Myanmar is ranked 2 out of 183 countries most vulnerable to extreme weather events. With more frequent heat waves, floods, cyclones and droughts that impact local production and food security, climate change poses a severe and urgent threat to people's livelihoods and sustainable development in Myanmar. However, people's ability to adapt and respond to climate change is severely hampered by decades of authoritarian rule, agrarian land struggles and long-running civil conflicts. These conditions have only worsened after the military in February 2021, instituted a violent and repressive order which has resulted in a violent conflict, displacing more than 2 million peoples.

Research by the MyCClimate project shows that the situation after the coup has also significantly endangered the livelihoods of Indigenous communities who live in biodiversity hot spots and resource-rich areas of Myanmar. Alongside devastating air strikes from the Myanmar

¹⁹ Chambers and Kyed 2024.

²⁰ Chambers and Kyed 2024.

²¹ Fadal and Moe 2021.

²² Chambers and Kyed 2024.

military, people in these areas are made further vulnerable by military-driven extractive activities and the proliferation of war economies. In the absence of oversight mechanisms, the MyCClimate project documents a rapid increase in deforestation and unregulated mining, which is polluting waterways, decimating forests, destroying mountains, and causing landslides and changes to fragile ecosystems. In addition to threatening local land rights and livelihoods, the military's plans to revive controversial hydropower dams and palm oil plantations will heavily disturb important riverine ecosystems, destroy natural forests and threaten indigenous communities' livelihoods.

Prior to the February 2021 coup, there were multiple international development programs targeting climate change in Myanmar, but most focused on technocratic, state-led interventions.²³ Given the vulnerability of Indigenous people and the environment under the military junta, MyCClimate researchers argue that the need to adapt climate-related and environmental conservation programming is now more vital than ever. Their research points to the need for climate financing to shift away from top-down, state-centric and purely technical solutions to people-centered approaches with flexible funding and reporting requirements suitable for local CSOs and Indigenous-led groups that would be more suitable for a volatile and insecure context.²⁴

Research from the MyCClimate project in Myanmar, shows that significant initiatives are underway on the climate and environmental front among the pro-democracy opposition to the military, including from Indigenous-led organisations and the civilian wings of non-state armed groups. Myanmar has a strong civil society sector and its Indigenous groups are some of the most vocal actors on climate change. Some non-state armed groups and their associated state-like governance systems are also engaged in environmental activities. At the forefront of these initiatives is the Karen National Union, Myanmar's oldest ethnic resistance group with control over large areas on the border with Thailand, which has long been engaged in forest conservation and biodiversity protection. As a reflection of these initiatives, the Karen National Union

is currently developing a climate action plan, including a carbon reduction emissions scheme. Although other non-state armed groups in Myanmar are somewhat behind in the implementation of environmental protection laws, they are increasingly inspired by the Karen National Union and are under pressure from their own civil society groups to scale back mining and deforestation. In addition, the parallel National Unity Government and its Ministry of the Environment and Natural Resources, has started several initiatives, including climate change awareness campaigns and restrictions on deforestation in areas they control. However, these groups face immense challenges in accessing funding to implement their activities due to the presence of conflict in the areas they control, but also the strict funding requirements, which remain largely constrained by state-based models. Research from the MyCClimate project highlights the importance of climate finance, which both integrates conflict sensitivity, and supports non-state community led climate initiatives and institution-building.²⁵

²³ Kyed, H.M and Chambers, J. 2023. 'Climate Change Actions in Conflict Affected Contexts.' *DIIS Policy Brief*, 6 March.

²⁴ Chambers and Kyed 2024; Kyed and Chambers 2023.

²⁵ Chambers and Kyed 2024.

4. Gender Inequality

Research across all projects shows that women suffer disproportionately from the impacts of the climate-conflict nexus, for various social, economic and cultural reasons. Despite changes to national-level laws to promote gender equality in some countries, the increasing privatisation of common lands in conflict-affected contexts has a disproportionately negative impact on women and their livelihoods. In Kenya, for example, research from RARE (Project 3) shows that while recent legal and constitutional reforms are attempting to address these issues, there remains significant challenges to supporting women's access to land and resources.²⁶ Part of this is informed by the fact that in many rural areas, land ownership and transfer is guided by cultural and social norms, which position women as subordinate to men, and in some cases, excludes women entirely from inheritance rights.²⁷ In Tanzania too (Project 2), men are customarily entitled to land ownership through patrilineal inheritance rights, depriving women of access to, control over and ownership of family and village/communal lands.²⁸

Research by the Timber Rush project in the Southern Highlands of Tanzania (Project 2) shows that the rapid expansion of investment in nonindustrial private forestry has seen a surge in private acquisitions over village lands, which has had a disproportionate impact on women and girls.²⁹ Important land reforms in Tanzania in 1999 officially recognised customary rights and prohibited discriminatory practices preventing access to land by women. However, in practice the majority of transactions over smallholder land plots are conducted and/or supervised by men, who enjoy “unchallenged privileges” in accessing and controlling social interactions, which control the sale of land.³⁰ Where traditional inheritance practices limit women and girls to owning immovable resources such as land and trees, the sale of communal or village lands particularly affects divorced women and widows and their traditional reliance on customary lands.

5. Urbanisation Trends

Research in Kenya (Project 3), Somaliland (Project 7), Ghana and Burkina Faso (Project 8) highlights the importance of responding to urbanisation trends and the rural-urban interface in climate programming in conflict contexts. This builds off a growing body of work, which recognises the growing climate vulnerabilities of people living in urban and peri-urban spaces in conflict-affected contexts and the challenges posed by population growth. However, the majority of climate adaptation financing focuses on farmers adaptation to climate change, neglecting the needs of fast-growing small towns, mid-sized cities and peripheries of larger cities (Interview RURBAN, 10 November, 2023). Instead, these spaces have largely been ignored in climate-security financing. This is despite the fact that many urban centres are growing in population as a result of internal displacement, due to conflict, climate change and land acquisitions (Interview with PACCS, 9 November, 2023).

Preliminary research in Ghana and Burkina Faso (RURBAN, Project 8), shows that the increase in urban populations in small towns is driven by a complicated set of factors, including both climate volatility and conflict (very pronounced in Burkina Faso) (Interview RURBAN, 10 November). Their

²⁶ See Odote, C., Rahma, H and Husna, M. 2021. 'Over Promising while Under-Delivering: Implementation of Kenya's Land Act.' *African Journal of Land Policy and Geospatial Sciences*, 4 (2): 301-2.

²⁷ See eg. Bluwstein et al. 2018, 814;

²⁸ Lusasi, J. and Mwaseba, D. 2020. 'Gender Inequality and Symbolic Violence in Women's Access to Family Land in the Southern Highlands of Tanzania.' *Land*, 9: 1-14.

²⁹ Lusasi and Mwaseba 2020.

³⁰ Lusasi & Mwaseba 2020, 7; see also Nsenga, J., & Mwaseba, D. 2021. 'Intra-household Gender Relations and Women Participation in Non-Industrial Private Forestry in the Southern Highlands of Tanzania.' *International Forestry Review*, 23(1): 68-78.

research shows that because of the scale and rate of movement, many people are arriving to live in small towns in an urban governance vacuum and with pressures on ecosystem services for mixed livelihoods (rural and urban), and limited infrastructure and social services support.³¹ While there are obvious livelihood opportunities for people moving to these locations, they also experience new vulnerabilities, especially female headed households and young people who remain dependent on older male relatives and clans for land and livelihood opportunities (Interview RURBAN, 10 November, 2023).

How poor communities are supported in urban peripheries is vital to the climate-conflict-security nexus. Like Ghana and Burkina Faso, research in Somaliland (PACCS, Project 7) shows that communities displaced by conflict in peri-urban spaces lack access to social services, infrastructure for basic services like water and electricity, but that they are also extremely vulnerable to climate-related disasters such as flooding and drought.³² Research by RURBAN in Ghana and Burkina Faso highlights the importance of investing in climate-resilient infrastructure in expanding small towns (Interview RURBAN, 10 November 2023). This could include, for example, the development of water harvesting systems, storage facilities, toilets and sewage facilities and waste management that can withstand the impacts of climate change. Improving access to essential resources can support the changing livelihoods of people displaced by conflict and climate change, whilst also reducing the vulnerability of communities to climate-induced shocks.

Conclusion

This meta-study has provided an overview of the findings from eight Danida-funded research projects, with a particular focus on lessons for programming on climate change in countries affected by conflict. Overall, the research highlights that land alienation policies play a key role in conflict dynamics. While climate change itself does not directly cause violent conflicts, its impact on the natural environment, society and levels of inequality can heighten the risks or worsen existing conflicts, consequently contributing to insecurity. Conflict also threatens food security and triggers forced displacement, eroding people's local capacity to cope with and adapt to environmental change and climate-driven risks. The research also underscores the persistence of gender inequalities in land access and control, despite legal interventions, and emphasises the need for synergistic efforts involving both men and women for sustainable development and natural resource management at the village and district level.

Denmark's current strategy for development cooperation pledges to engage substantially in supporting climate change adaptation and increasing resilience in fragile contexts. Integrating climate change programming in countries, which face protracted conflict, is a pressing issue. However, the research highlights how support for climate change programming requires a deeper understanding of local conflict dynamics and the ways in which climate change programming can interact with and amplify existing inequalities. Based on the selected research projects, ten key areas should be considered for policymakers regarding climate change programming in contexts with violent conflict.

³¹ Agergaard, J., Kirkegaard, S. and Birch-Thomsen, T. 2021. 'Between Village and Town: Small-Town Urbanism in Sub-Saharan Africa.' *Sustainability*, 13(3): 1-21; Møller-Jensen, L., Agergaard, J., Andreasen, M.H., Kofie, R.Y., Yiran, G.A.B., Oteng-Ababio, M. 2023. 'Probing Political Paradox: Urban Expansion, Floods Risk Vulnerability and Social Justice in Africa.' *Journal of Urban Affairs*, 45 (3): 505-21.

³² See also Møller-Jensen et al. 2023.

Key Considerations for Climate Programming in Conflict Contexts

- 1. Country-specific Programming:** Climate change is not a causal instigator of conflict, but feeds into existing dynamics and historical tensions. This includes, for example, understanding changing land laws and land policies and how they have impacted communities in different ways, including policies which favour sedentary farmers and restrict the movement of nomadic or indigenous groups. It is vital that climate change programming in conflict-affected countries is tailored to meet the needs of local communities. This builds off Danida's localisation agenda. Beyond the importance of understanding local community needs, programming can amplify and feed into existing conflict dynamics.
- 2. Recognition of Land Policies as a Catalyst for Conflict:** Climate change interventions should incorporate mechanisms to address land-related grievances and disputes, promoting equitable land distribution and tenure security. Importantly, interventions must recognise the distinct vulnerabilities of women and girls whose lives and livelihoods are disproportionately impacted by conflict arising from disputes over land tenure. Policies which advocate for and establish secure land tenure systems that recognise and protect the customary land rights of pastoralist and Indigenous communities are important. Programming should also be wary of how climate change interventions can feed into pre-existing dynamics of land encroachment, including through the privatisation of communal or village lands in the name of conservation.
- 3. Protection of Indigenous and Nomadic Pastoralist Rights:** Policymakers must prioritise the protection of Indigenous and nomadic pastoralist rights, as their unique lifestyles and livelihoods are often directly impacted by climate change. Legal frameworks should safeguard customary and communal land tenure, ensuring their resilience in the face of climatic shocks. Moreover, climate financing should be directed at nomadic communities, rather than prioritising sedentary farming within a framework of individualised private property. Other areas of support should include community-based resource management models that empower local people to actively participate in decision-making processes related to land use and natural resource management, including women and youth. Laws and policies that protect communal tenure should be prioritised, but also implemented in consultation with Indigenous and pastoralist communities and with respect for customary laws and norms.
- 4. Community-driven adaptation strategies, rather than universal policies:** Flexible and inclusive adaptation strategies that consider the dynamic nature of conflict and the specific vulnerabilities of marginalised groups, such as women and youth, should be adopted. Interventions need to be tailored to the unique needs, knowledge, and practices of different communities, empowering them to actively contribute to the design and implementation of sustainable solutions. By integrating traditional wisdom with scientific insights, adaptation programmes can promote sustainable practices that enhance resilience, such as water conservation techniques and diversified livelihood strategies. This approach requires working closely with local community based-organisations, increasing the likelihood of successful implementation and long-term sustainability.³³ In the African context, it is

³³ Mollo, A.A., Mitullah, W.V. and Nathan, I. 2020. 'Civil Society Organisations in Adaptation Policy Translation for Pastoralism.' *Rare Working Paper*. Institute for Development Studies, University of Nairobi and the Department of Food and Resource Economics, University of Copenhagen.

particularly important to engage farmers and pastoralists as “active agents” in adaptation projects and to ensure that incidences of conflict are reduced in light of the growing pressures on and access to grazing lands.³⁴

- 5. Integration of Conflict Sensitivity in Climate Change Policies and Programming:** Policymakers must recognise the intricate interplay between climate change and violent conflict. Each of the projects highlight the need for integrative thinking not just across crises, but also scales. Integrating conflict sensitivity into climate change policies is crucial to avoid exacerbating existing tensions and fostering sustainable mitigation and adaptation strategies. By understanding the multifaceted interactions between environmental stressors, land tenure, socio-economic inequalities and political dynamics, policymakers can develop targeted interventions to mitigate the adverse effects of climate change and promote sustainable peace in these vulnerable regions.
- 6. Gender-Inclusive Climate Programmes and Policies:** Recognising the distinct roles and vulnerabilities of both men and women within conflict-affected contexts is critical for effective climate change programming. Policymakers should prioritise gender-inclusive strategies that consider the unique needs and contributions that women make in resource management, livelihood diversification, and community resilience to climate change. Including women in decision-making processes and providing them with equal access to resources and climate change adaptation strategies not only promotes gender equity but also enhances the overall adaptive capacity of communities.³⁵
- 7. Conflict Resolution Mechanisms:** Strengthening local conflict resolution mechanisms is imperative for preventing disputes over resources from escalating into violence, especially in periods of drought. Policymakers should invest in community-based conflict resolution training and establish platforms for dialogue in conflict-affected areas. This includes promoting traditional conflict resolution practices and creating accessible channels for dispute resolution, which includes non-traditional authorities such as women and youth. Legal aid could also be channelled to fund vulnerable groups to help address land grabs and ensure that single-women households, for example, are better supported.
- 8. Regional Mechanisms and Cross Border Collaboration:** Transboundary issues, such as migration routes and resource management, often contribute to conflicts between rural communities in countries in Africa. Policymakers should facilitate cross-border collaboration and information sharing between governments and local communities in neighbouring regions about climate change and its environmental and social consequences. By fostering regional cooperation, policymakers can address shared challenges effectively, promote sustainable resource use, and prevent conflicts that may arise from disputes over borders and resources. Cross-border collaboration has the potential to strengthen diplomatic ties, contribute to regional stability and climate change resilience.

³⁴ Rotich et al. 2023a, 14; See also Bekele, M., Bezabih, M., Elias, H., Fisker, P., Gebrehiwot, T., Kuma, T., Mekasha, T., Mekonnen, A., Tarp, F. and Hailemaraim, T. 2020. ‘Building Resilience to Climate Change in Ethiopia: What do we Know so Far?’ University of Copenhagen; Rotich et al. 2023b.

³⁵ See Teklewold, H., Bezabih, M. and Gebrehiwot. 2022. ‘Gender Differences on the Choices of a Portfolio of Climate Change Adaptation Strategies in Ethiopia.’ *Climate Risk Management*, 38 (100467).

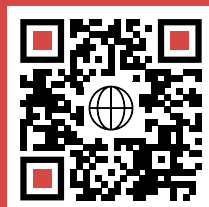
- 9.** Climate Change Governance for Urban Transformation: Climate change policies and programming need to better account for population growth and urbanisation trends due to internal and external conflict as well as a dwindling resource bases in rural areas. In countries affected by conflict, rural-urban migration trends are putting significant pressure on urban infrastructure, impeding people’s ability to adapt to climate change (especially in periods of climatic shock e.g. drought). More support needs to be directed to public safety nets and water and land management in small to medium sized towns, to help people respond to conflict and climatic shocks when exposed. This should also include support for alternative livelihoods strategies based on changing conditions at the household level to avoid poverty and better enable resilience in the face of various climate shocks.³⁶
- 10.** Investment in Research: The ability of international policymakers to build robust strategies for climate change in conflict-affected contexts relies on an in-depth understanding of the complex dynamics on the ground. If Denmark wants to pursue a localisation agenda in its programming on climate change in fragile contexts, it is important to continue funding research with local research partners and institutions – such as the Danida funded FFU projects. Each of the principal investigators highlighted the importance of having strong local partnerships, especially in contexts, which experience ongoing forms of conflict.
- 11.** These key findings underscore the need for an integrated and context-specific approach that recognises the complex dynamics between climate change, conflict, and the rights of vulnerable populations.

³⁶ See e.g. Bekele, M., Bezabih, M., Elias, H., Fisker, P., Gebrehiwot, T., Kuma, T., Mekasha, T., Mekonnen, A., Tarp, F. and Hailemaraim, T. 2020. ‘Building Resilience to Climate Change in Ethiopia: What do we Know so Far?’ University of Copenhagen.



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