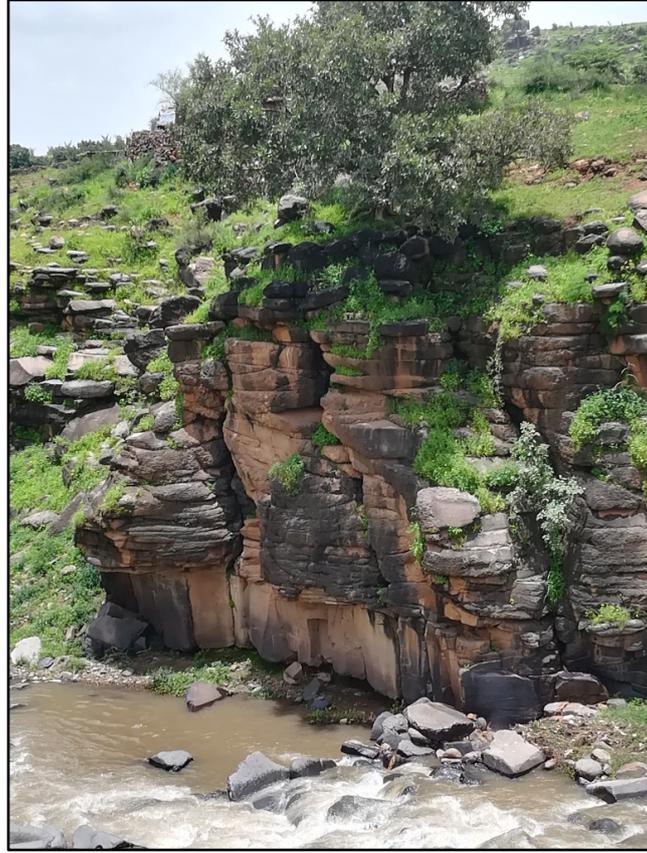


Climate and Conflict Sensitivity:

Improving aid's interaction with climate, the environment and conflict in Sudan

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Wadi Kongi, Golo, central Jebel Marra. Photo credit: Hassan-Alattar Satti

This analysis was conducted by Hassan Alattar Satti, Hussein Sulieman and the Conflict Sensitivity Facility (CSF). The CSF is funded by the United Kingdom's FCDO. The CSF provides analysis, capacity and outreach to support conflict-sensitive aid in Sudan.

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Executive Summary

Climate change is expected to continue to affect Sudan's weather patterns significantly. The observed historical trends of climate change across Sudan include increased rainfall variability, much warmer temperatures and more frequent droughts.¹ At a local level, climate change further interacts with localised environmental factors (e.g., environmental degradation caused by human activities), and each can exacerbate the effects of the other. Sudan has served as a case study for the role of environmental factors in fuelling violent conflicts and it is often depicted as the site of the first climate conflict in the world.² This analysis paper provides an overview of how climate change and environmental degradation interact with conflict in Sudan, and further examines the implications of these dynamics for conflict-sensitive aid, with recommendations to inform policy and practice.

Climate change and conflict in Sudan

Research over the past 20 years has deepened understanding that climate change interacts with conflict in a number of complex ways. Some of the nuances of this complexity include:

- There is insufficient evidence to support a relationship of direct causality between climate change and conflict. Such explanations overlook the roles of critical political, social, economic and environmental factors.
- The effects of climate change on conflict and security depend on many other factors, such as poor governance, existing marginalisation, and long-term environmental degradation as a result of human activity. Each state or locality in Sudan is unique in terms of environmental needs, conflict dynamics and political frameworks.
- Combined approaches to reducing conflict risk and preparing for a changing climate can be a useful strategy. There is increasing interest in how integrated strategies could help to reduce combined conflict, climate and environmental risks.
- Competition and conflict are not inevitable. Climate change responses also offer opportunity for cooperation.

Environmental governance and development policies play an important role in enabling or limiting conflict-affected communities' ability to peacefully cope with the impact of climate change and environmental degradation through several ways.

Firstly, policies over the past fifty years have undermined traditional livelihoods systems and approaches to natural resource management. For example, the relationships between herders and farmers in Sudan evolved over many years with often peaceful sharing of natural resources, even in times of drought and flood.³ In Darfur, these relationships were maintained by a wider consensus over natural resource management institutions. However, these relationships, which could be an important asset for managing the effects of climate change, were disrupted by changes in land use systems, commercialisation of resources, and national-level conflicts.⁴ The disrupted relationships have undermined the co-adaptation and resilience of both farmers and pastoralists to climate change.⁵

¹ Hermance, 2013

² Selby & Hoffmann, 2014

³ Young & Ismail, 2019

⁴ Bromwich, 2020

⁵ Young & Ismail, 2019

Secondly, development policies which are environmentally unsustainable and socially inequitable have had a direct negative effect on conflict dynamics. In regions like South Kordofan and Blue Nile, conflict and environmental degradation have both been linked with the development process of expanding mechanised agriculture in Sudan.⁶ This process was associated with massive violence against local communities and significant destruction of the environment as large swathes of land were cleared by farming investors, and degraded by intensive farming approaches. The displacement of people from their land and the clearance of forests undermined their wellbeing, exacerbated grievances, and reduced their capacity to cope with climatic shocks.⁷ Such examples may also provide insight as to how top-down climate adaptation or green energy policies may further contribute to conflict and/or environmental degradation if they are not sensitive to specific contexts.

Implications of climate change for conflict-sensitive aid

The effects of climate change stand to disproportionately affect those who are already socially and economically vulnerable, and the intersection of climate shocks with dynamics of conflict and fragility has the potential to further undermine humanitarian and development needs. These effects may undermine adaptive capacities, worsen food security, and deteriorate the wellbeing of vulnerable communities such as those who are internally displaced as well as vulnerable groups such as women, young people and children.⁸ These impacts are heightened when traditional systems and institutions have been undermined by conflict or by adverse policies.⁹ Current trends suggest a worrying increase in climate and conflict-related vulnerability across Sudan.

The actions, decisions and very presence of aid actors (humanitarian, development and peacebuilding) and donors have implications for both conflict dynamics and the environment. Aid actors should seek to have a positive, rather than negative, effect on the conflict and environmental challenges in the areas where they work. This means taking steps to avoid contributing to environmental degradation or worsening the effects of climate change, and if possible, to contribute to local-level strengths. This has implications for a number of considerations, including: aid sector policy and analysis, institutional memory and sector wide learning, integrated approaches to designing aid programming, targeting and inclusion, aid's impact on the environment, and linking local, national and global accountability.

Environmental peacebuilding approaches (including climate security-related programming) may offer key opportunities for using a combination of interventions with shared environmental sustainability, climate adaptation and peacebuilding objectives. Successful experiences from Sudan shows that effective programming is possible through a combination of strategies including supporting traditional peacebuilding mechanisms; addressing or removing environmental threats; addressing poverty and a lack of livelihood options; or promoting inclusive governance of natural resources.¹⁰ A component of successful environmental peacebuilding interventions has been their ability to build relationships between communities and reduce the incidence of localised conflicts through promoting effective use of their shared natural resources.¹¹ This can be achieved through realising the complementary relationships between different users of natural resources (e.g., farmers and pastoralists) and by supporting that with technical interventions that benefit all

⁶ Selby & Hoffmann, 2014

⁷ Foong, et al., 2020; Selby & Hoffmann, 2014

⁸ Peters & Dupar, 2020; UN Secretary-General, 2021

⁹ Fitzpatrick & Young, 2016

¹⁰ Bronkhorst, 2011

¹¹ Bromwich, 2014; UNEP, 2020; Practical Action, 2012

groups.¹² While such initiatives will not reverse the effects of climate change, they may increase communities' capacities to manage these effects.

Conflict, environmental degradation and climate change play an increasingly profound role in Sudan, leading to more humanitarian suffering, more deaths, protracted displacement, severe poverty and exacerbated inequality. Humanitarian, development and peacebuilding programmes cannot treat these as independent sets of phenomena with distinct responses. Climate change, environmental degradation, and conflict interact in complex ways, and aid that does not recognise this complexity risks contributing to conflict in the short- and long-term. The paper offers three overarching principles to guide good practice, including: applied conflict analysis, which informs programmes based on an understanding of how conflict, climate and the environment interact in specific contexts; working across silos to facilitate better understanding and shared knowledge across diverse specialisms and expertise, and; acting on a deeper understanding of the interconnected nature of conflict and environmental dynamics across local, national and international levels. These principles can be applied in the following ways:

1. **Invest in knowledge and cross-silo evidence and learning:** This includes more research, better expertise within the aid system, and applying research to practice.
2. **Build aid around inclusive engagement and community-led solutions:** This includes intersecting approaches, consulting closely with communities, working with existing practices and mechanisms, and exploring platforms for cooperation and dialogue around these issues.
3. **Incentivise and enable good practice:** This includes applied tools and specially designed markers, tailoring integrated global donor approaches, investing time in learning and reflection, tailored M&E, and new technology and pilot approaches.
4. **Green the aid sector:** This includes environmental accountability and due diligence, specialised expertise, and investing in alternative green practice.
5. **Ensure high-level discussions are informed by local realities and knowledge:** This includes conflict-sensitive climate change policies and action, ensuring environmental policies and natural resources governance are inclusive and strengthen relationships, and ensuring that communities drive climate response.

¹² UNEP, 2014

Introduction

Climate change is one of the most urgent global issues of our time. According to the 2021 Intergovernmental Panel on Climate Change (IPCC) report, human activities have continued to contribute to increased greenhouse gas in the atmosphere, reaching an unprecedented annual average. The report shows that each of the last four decades has been remarkably warmer than the one preceding it.¹³ The 2022 report of IPCC's working group 2 provides a further assessment of the impact of climate change, highlighting that 3.3-3.6 billion people live in contexts that are highly vulnerable to climate change, and that communities and ecosystems least able to cope are being hardest hit.¹⁴ In Sudan, the observed long-term historical trends of climate change include increased rainfall variability, much warmer temperatures and more frequent droughts.¹⁵

The eruption of the Darfur conflict in 2003 was accompanied by a lively debate about the role of climate change in fuelling conflicts in Darfur and elsewhere in the country. This debate demonstrated the need to understand the complex interactions between environmental, political and socio-economic factors across specific contexts – such understanding must continue to evolve as both the effects of climate change and the nature of conflict in Sudan continue to change over time.

The effects of climate change also interact with and can exacerbate the effects of more localised environmental factors (e.g., environmental degradation due to human activity such as mechanised farming or gold mining) in a profound and devastating way for many of Sudan's communities, as the combined effects undermine natural resource management, livelihoods, and the health of the communities and their surrounding ecosystems. For the purpose of this analysis, we will consider these dynamics together, and their intertwined relationship with conflict dynamics in Sudan. However, it is beyond the scope of the paper to provide an exhaustive analysis of all environmental trends and their interaction with conflict dynamics.

There is a mounting recognition amongst aid actors that their interventions can have unintended impacts on the contexts where they are operational.¹⁶ In Sudan, the risk of this cannot be overestimated. The interlinked web of conflicts in Darfur, Eastern Sudan, South Kordofan and Blue Nile are highly complex and involve multiple different actors. It is therefore vital that aid actors understand the conflict dynamics specific to the areas where they work and adopt a conflict-sensitive approach to prevent triggering or exacerbating conflicts through their interventions and to ensure they contribute to peace and social cohesion. The confluence of climate change, conflict, and environmental degradation means that inadequate attention to climate change and environmental issues when implementing aid programmes can further exacerbate the vulnerability of target communities (especially marginalised groups such as women, young people, and minorities) and contribute to the structural causes of national and local conflicts. Hence, it is widely recognised that aid programming needs to be conflict-sensitive *and* climate-sensitive in order to build communities' resilience to climate shocks and stressors, to avoid disrupting their relationships with other communities, and to contribute to sustainable peace.¹⁷ Gender is inextricably linked to these dynamics¹⁸, and therefore it is important that gender-sensitivity underpins these approaches.¹⁹

¹³ IPCC, 2021

¹⁴ IPCC, 2022

¹⁵ Hermance, 2013

¹⁶ Saferworld, 2015

¹⁷ UNHCR, 2020

¹⁸ UNEP, UN Women, UNDP and UNDP/PA/PBSO, 2020

¹⁹ Saferworld, 2020

The Conflict Sensitivity Facility (CSF) has commissioned this analysis of the intersection between climate change, environmental degradation, and conflict in Sudan to help aid actors understand the dynamics currently at play in Sudan, and develop appropriate strategies and interventions. It draws on literature on the link between climate change and conflict in Sudan, and a stakeholder discussion with donors, practitioners and academics who are currently working, or previously worked, in Sudan. Semi-structured interviews were conducted with development practitioners and researchers to identify knowledge, policy and practice gaps that need to be considered by aid programmes in Sudan.

This analysis paper is divided into three sections. First, it provides an overview of climate change and explores how it interacts with conflict in Sudan. Next, it presents the implications of these dynamics on conflict-sensitive aid in Sudan. The report ends with recommendations for conflict- and climate-sensitive aid policy and practice.

Climate change and conflict in Sudan

The role of environmental factors in fueling Sudan's conflict has received significant attention from researchers and policy-makers. Indeed, Sudan's internal war in the western region of Darfur is often portrayed as the first climate change war in the world.²⁰ Sudan generally, and Darfur in particular have often been cited as case studies for the link between climate change and conflict.²¹ In 2007, Ban Ki Moon asserted that the "Darfur conflict began as an ecological crisis, arising at least in part because of climate change."²² The narrative of a direct causal relationship between climate change and conflict was also adopted by the former Government of Sudan, attributing the conflict in Darfur to environmental change and increased pressure on natural resources.²³

The reality, however, is more complex, and research over the past 20 years has provided more nuanced ways of understanding how a range of complex factors interact, with implications for the likelihood of conflict. The points below summarise some of these nuances:

- **There is insufficient evidence to support direct causality:** One explanatory pathway focusing on a relationship of direct causality, as described above, influenced the dominant narrative 15-20 years ago as a way to describe the conflict in Darfur. Assumptions were also made about the implications for Sudan based on a hypothesis that increasing scarcity and variability of natural resources as a result of climate change put communities into greater competition with each other, and that this competition led to violent conflict. However, quantitative evidence based on rainfall data and satellite maps of vegetation cover do not adequately support this hypothesis, and newer research shows that climate change does not directly or automatically lead to conflict. Furthermore, a pathway of direct causality overlooks the role of critical political, social and economic factors, alongside the interplay with wider environmental factors.
- **The ramifications of climate change for conflict and security depend on its interaction with many other factors:** For example, weak institutions and poor governance can result in poor adaptation and mitigation policies, worsening the disruption that climate shocks can have on communities and their resilience to conflict.²⁴ Existing marginalisation and grievances are also important, as climate change and environmental degradation disproportionately affect

²⁰ Selby & Hoffmann, 2014

²¹ Ibid

²² Ban, 2007

²³ Aljazeera, 2006

²⁴ Messer, 2010

those who are already marginalised, contributing to ongoing vulnerability and grievances. Furthermore, climate change should be situated within a bigger picture of a long history of environmental change and degradation as a result of human activity. Every state or locality in Sudan is unique in terms of environmental needs, conflict and peace dynamics, and political frameworks.

- **Combined approaches to reducing conflict risk and preparing for a changing climate can be a useful strategy:** Climate change may be referred to as a ‘threat multiplier’²⁵ according to the complex ways it interacts with other factors which influence peace and security. At the same time, violent conflict plays a role in contributing towards high vulnerability to climatic hazards.²⁶ Therefore, there is increasing interest in how integrated strategies could help to reduce combined conflict, climate and environmental risks.
- **Competition and conflict are not inevitable - climate change responses also offer opportunities for cooperation:** Environmental cooperation, better natural resource management, and enhanced climate change adaptation and disaster risk reduction also offer opportunities to contribute to peace both at the local and the national level. Recognition must be given to the complexity and multiplicity of actors involved at different levels (international, regional, national and local) and the different factors shaping their involvement in the conflict.²⁷

Understanding the link between environmental factors and conflict requires considering the social, spatial and temporal relationships between ‘scarcity’ and ‘abundance’ instead of the objective scarcity of natural resources.²⁸ ‘Scarcity’ and ‘abundance’ exist in relation to one another i.e., people’s grievances of scarcity erupt in relation to a relative abundance of resources enjoyed by others. Thus, a group that is marginalised will have a greater perception of scarcity and greater grievances than in a community where a small amount of resources are shared equitably. The rest of this section explores the role played by environmental governance and development policies in enabling or limiting conflict-affected communities’ ability to peacefully cope with the impact of climate change and environmental degradation more broadly.

a) Undermining traditional livelihoods systems and natural resource management

In drought-prone regions like Darfur and Kordofan, the traditional livelihoods systems of pastoralism and farming have co-evolved over centuries to perform well within the conditions of extreme environmental variability. An integral part of this co-evolution and resilience was the integration and ability to work with environmental variability rather than against it.²⁹ In theory, this should be an enormous advantage supporting Sudanese communities’ capacities to manage and mitigate the impacts of climate change.

National-level conflicts and economic trends and policies have, however, undermined these traditional strengths and continue to disrupt relationships between farming and pastoralist communities. This disrupted relationship, in Darfur for example, is significantly linked to the way livelihoods have been transformed and to the way in which that transformation altered land use practices.³⁰ It is also linked to the disruption of traditional institutions through the introduction of statutory land tenure regimes. Statutory land policies, beginning with the 1970 Unregistered Land

²⁵ Peters et al, 2020

²⁶ ICPP 2022, B.2.4

²⁷ Bromwich, 2018

²⁸ Selby & Hoffmann, 2014

²⁹ Young & Ismail, 2019

³⁰ Young & Ismail, 2019; Young, et al., 2013; Osman, et al., 2013

Act, contributed to the transformation of land tenure systems from usufruct³¹ multiple rights towards increasing state control and exclusive individual rights to those who could afford it. This has led to the expropriation of land from many communities, and has presented barriers to overlapping and complementary land use systems that have helped to peacefully manage natural resource conflicts for centuries.³² Furthermore, traditional institutions were disrupted by the increasing commercialisation of natural resources that were previously/traditionally accessed for free by different groups, as well as by a series of political initiatives that undermined the native administration, which oversaw traditional land mechanisms.³³

These changes created an institutional environment shaped by a multiplicity of arrangements and created different expectations amongst different users on how access to natural resources should be organised.³⁴ While for many pastoralists free access to crop residues after harvest is the norm, many farmers are now more inclined to sell their crop residues.³⁵ In the past, farmers and herders shared resources in the form of crop residues and manure fertilisers. This sharing of resources took place at the beginning of the dry season, allowing herders to utilise crop residues at a period where most of the good pastures are dried up, and at the same time provide maintenance for farmlands through manure organic fertilisation. As natural resources are increasingly commercialised, their prices fluctuate according to rainfall variability between years and from one place to the other. Consequently, crop residues are of higher cost in dry years than in good years and may lead to disputes in dry years.³⁶

Box 1. Natural Resource Institutions

Researchers in Sudan have recently given specific attention to the definition of natural resources institutions given by Frances Cleaver as the “arrangements between people which are reproduced and regularised across time and space and which are subject to constant processes of evolution and change.” The definition implies the continuous evolution of institutions, which Cleaver describes as “institutional bricolage.”

The undermining and consequent failure of customary institutions that facilitated the complementary and symbiotic relationships between different livelihood groups is evidenced by the continuous violations of local environmental governance arrangements. These violations take the shape of blocked livestock migratory routes, occupation of farmers’ lands, and the indifference towards the norms prohibiting cutting of live trees for firewood and commercial purposes.³⁷

Intercommunal relationships over natural resources and the institutional arrangements governing them vary significantly from one region to another and they continue to evolve (see Box 1³⁸). These institutional arrangements either facilitate inclusive adaptation of different groups or undermine their relationships and pave the way for more disrupted relationships between different communities. Any attempt to genuinely resolve conflict over natural resources would require peacebuilders to promote more inclusive natural resource management institutions that are adapted to the local context, taking into account traditional mechanisms (and also how these themselves impact on inclusivity, especially in relation to marginalised groups such as women, young people and minorities).³⁹

³¹ Usufruct refers to the legal right to use someone else’s property temporarily and to keep any profit made from it.

³² Osman, et al., 2013

³³ Young & Ismail, 2019

³⁴ Young & Ismail, 2019; Osman, et al., 2013

³⁵ ibid

³⁶ Young & Ismail, 2019

³⁷ Bromwich, 2020; Young & Ismail, 2019

³⁸ Cleaver, 2012

³⁹ Bromwich, 2020

b) Unsustainable and inequitable development policies

In many areas of Sudan, and particularly in the war-affected areas of South Kordofan and Blue Nile, the government policy of expanding mechanised agriculture undermined traditional livelihood systems by favouring Sudanese and foreign agricultural investors over local smallholders and pastoralists.⁴⁰ Much of the violence and conflict that took place in South Kordofan and Blue Nile in the 1980s was either a government strategy to expand mechanised agriculture or people's strategies to resist that policy.⁴¹ Large numbers of people were displaced from their homelands as a result of this policy and large swathes of forests were cleared to expand farming.⁴² In 2019, the national government estimated that approximately five million hectares were leased by foreign entities for mechanised farming schemes, and an additional large number of acres were leased by Sudanese elites.⁴³ Mechanised farming in Sudan has seriously degraded millions of hectares due to unsustainable practices. In 2008, the Gedaref Administration estimated that 50% of remaining rangeland had been degraded.⁴⁴ This shows that land degradation is already driven by development policies that are environmentally unsustainable and socially inequitable⁴⁵, and climate change may exacerbate this. Such examples also provide insights as to how top-down climate adaptation or green energy policies may further contribute to conflict and/or environmental degradation if they are not sensitive to specific contexts and their interaction with wider conflict and gender dynamics.

Increasing drought, higher rainfall variability and increased temperature have contributed to and exacerbated conflicts in Sudan, particularly at the local level, because they have coincided with poor adaptation policies. According to Youssif Eltayeb of Darfur Development and Reconstruction Agency (DDRA), "climate change can fuel conflicts in the presence of enabling conditions. Countries that can adapt well with climate change do not experience conflicts as a result of it." Indeed, drought could be a cause of disaster in the absence of functioning market and relief systems.⁴⁶ Government approaches to the drought-affected region of Darfur in the 1980s and 1990s, not only failed to provide relief, but actually contributed toward the intensification of the effects of the drought, undermining communities' ability to cope.⁴⁷

Often, the causes and the solutions for these environmental challenges that lead to natural resource degradation lie within the policy domain, where improved policies could be promoted to invest in enhancing access to water and preventing land degradation. According to Musa Adam Abdul-Jalil of the University of Khartoum, "the weight that should be given to climate change depends heavily on other social and political factors." In Sudan's context of erratic rainfall and high environmental variability, natural resource scarcity depends on who demands natural resources, how equitably access to natural resources is organised, and how natural resources are managed and utilised. Patterns of land use, forest and rangeland conservation, integration of farming and pastoralism, as well as proper crop choices are crucial for environmental sustainability in the country.

Implications of climate change for conflict-sensitive aid

While the intersection between climate change and conflict has received substantial attention from

⁴⁰ Selby & Hoffmann, 2014

⁴¹ Suliman, 2006; Foong, et al., 2020; Selby & Hoffmann, 2014

⁴² Selby & Hoffmann, 2014

⁴³ Schwarzstein, Peter, 2019

⁴⁴ Sulieman, Hussein M., 2018

⁴⁵ *ibid*

⁴⁶ Messer, 2010

⁴⁷ Bromwich, 2018

Box 2. Conflict Sensitivity

means that aid programmes take steps to avoid contributing to or prolonging conflicts, and instead seek to ensure that aid helps build healthy, resilient and peaceful communities.

academics, practitioners and policy-makers, the implications of that intersection for the aid sector has only recently begun to receive more attention. Efforts to understand the effects of climate change and conflict on aid have increased since the establishment of the Climate Security Mechanism in 2018. The ministerial event held by the UN General Assembly (UNGA) in September 2020 was heralded as a key step forward towards enhancing the focus of aid actors on the intersection of climate change and conflicts globally.⁴⁸ In this section, we outline some of the implications of climate change for conflict-sensitive aid in Sudan.

a) Climate and conflict: Impact on humanitarian and development needs

Climate change effects of increased rainfall variability, higher temperatures, and more frequent droughts will disproportionately affect those who are already socially and economically vulnerable. As such, climate change and resulting shocks exacerbate pre-existing inequalities among the groups mostly likely to receive international assistance. However, the aid sector's approaches to risk management and protection regimes are not systematically equipped to consider climate as a complicating factor.⁴⁹

Food Security and Resilience. The intersection of climate shocks with the dynamics of conflict and fragility has strong potential to further undermine food security in Sudan, particularly as protracted conflict undermines the adaptive capacity of local communities and weakens their ability to cope with environmental shocks.⁵⁰ Armed conflict can limit the ability of farmers to reach their land because of the physical threats they may be exposed to, including gender-based violence.⁵¹ Shifting gender norms around women's participation in agriculture and herding offer opportunities for gender equity, but also potential security risks for women. A study by the Feinstein International Centre to measure the impact of different shocks on household resilience⁵² in Darfur found that despite experiencing a steady recovery from the 2003 conflict, the 2013 drought significantly reduced the resilience of households in South and West Darfur.⁵³ The changing climate will affect the types of crops and livestock that can be raised in Sudan, as well as the most effective land use models. Traditional, flexible, and inclusive approaches to land use that are negotiated at the community level will be important to preserve and will offer vital lessons on good practice as climatic variability increases. What works in one region may not work in another; therefore it is critical that support for such approaches is underpinned by a strong understanding of the specific local context (including environmental dynamics and applied conflict- and gender- sensitivity to identify and mitigate any potential risk of perpetuating harmful gender norms or other power imbalances).

Health and Infrastructure. The 2021 rainy season caused floods in different states in Sudan, including Gedaref, White Nile, South Darfur, West Darfur, Kassala, River Nile and Aljazirah. Approximately, 88,000 individuals were impacted and homes as well as infrastructure were damaged. The risk of water- and vector-borne diseases in these states increased with the floods.⁵⁴ Climate change and environmental degradation are believed to be contributing to increased urbanisation, alongside long-running trends of land expropriation for investor-driven mechanised farming. This puts great pressure on existing utility systems, such as water and electricity, in urban areas. Indeed, the implications of current trends for urban areas is an under-researched area.

⁴⁸ Peters & Dupar, 2020

⁴⁹ Peters & Dupar, 2020 ; ICRC, 2020

⁵⁰ ICRC, 2020

⁵¹ ibid

⁵² Resilience is defined here as the ability of people to mitigate, weather, and "bounce back" from shocks or adversity. More details could be found in Maxwell, et al., 2017.

⁵³ Fitzpatrick & Young, 2016

⁵⁴ OCHA, 2021

Displaced populations. In 2020, the increased incidence of localised violent conflict in Darfur and Kordofan resulted in an additional 79,000 new displacements recorded.⁵⁵ As of August 2021, the total number of internally displaced people (IDPs) reached 2.5 million, out of which 2.2 million live in protracted displacement in Darfur.⁵⁶ People who are displaced by armed conflicts are also more exposed to the climate risks of droughts and floods, as they are uprooted from traditional social and environmental structures. Armed conflict reduces resilience to climate shocks by eroding the integrity of institutions and communities, which in turn can make them vulnerable to additional threats.⁵⁷ For example, in Darfur, those who have been displaced often have to move more than once due to climate or insecurity related difficulties, which worsens their livelihood situation.⁵⁸ At the same time, livelihoods that may arise as a result of changed contexts due to displacement and lack of access to land, such as firewood collection, brickmaking, and charcoal-making, can place unsustainable demands on natural resources.⁵⁹

Vulnerable groups. Women, young people, and children in particular face higher risks from the combined impact of environmental and conflict threats.⁶⁰ These deprive young women and men of livelihood opportunities as they often lack access to education and natural resources which pushes many of them to migrate internally or abroad.⁶¹ Omer Mastour of UNDP elaborated that young people are the “fuel of conflict because there is no prospect of decent employment for them”.

This migration can lead to dramatic changes in community-level social composition, and can lead to both opportunities and challenges for women who are increasingly taking on different livelihood responsibilities. However, such transition can be risky from a security perspective, and can increase their vulnerability. Despite a good rainy season in 2020, a WFP comprehensive food security and vulnerability assessment for the first quarter of 2021 found that women-headed households in Sudan were 11 percent more likely to face food insecurity due to poor access to the labour market.⁶²

Women are also more vulnerable to economic, physical and sexual gender-based violence in the context of climate-related displacements.⁶³ Women who have experienced protracted displacement and live in refugee camps are particularly exposed to sexual and physical violence as they move long distances from their communities in search for water and wood.⁶⁴ More erratic rainfall and drought increases the time women spend fetching wood and water for their families as they have to travel longer distances to find water.⁶⁵ While women represent most of the labour in the agricultural sector, they have limited control over the financial gains they make for their households as these gains tend to be controlled by men.⁶⁶ This is due to the fact that prevailing social norms dictate that men manage the farming activities and women perform most of the labour work, though the specific dynamics vary across the difficult cultures of Sudan.⁶⁷

b) Considerations for aid actors

The actions, decisions and very presence of aid actors (humanitarian, development and peacebuilding) and donors have implications for both conflict dynamics and the environment. Aid

⁵⁵ OCHA, 2021

⁵⁶ USAID, 2021

⁵⁷ Ibid

⁵⁸ Young, 2009

⁵⁹ Fitzpatrick & Young, 2016

⁶⁰ Katie & Dupar, 2020

⁶¹ Satti, 2020

⁶² WFP, 2021

⁶³ UNDP, 2020

⁶⁴ UNFPA, 2021

⁶⁵ UNDP, 2020

⁶⁶ Fitzpatrick, et al., 2021; Ibid

⁶⁷ JICA, 2012

actors should seek to have a positive, rather than negative, effect on the conflict and environmental challenges in the areas where they work. This means taking steps to avoid contributing to environmental degradation or worsening the effects of climate change (which in turn may further contribute to conflict), and if possible to contribute to local-level strengths. This section presents areas where the aid sector interacts with these dynamics.

Aid sector policy and analysis. Understanding of climate change trends, policy and mitigation/adaptation measures have often been viewed from a top-down perspective, held within the domain of high-level global or national fora. However, how the effects of climate change interact with local conflict dynamics is highly context-specific and can vary significantly from one context to another, interacting with existing vulnerabilities and drivers of conflict in complex ways (as mentioned previously, climate change has been referred to as a ‘risk/threat multiplier’). Therefore, analysis which informs strategic decisions and the design and implementation of aid programming needs to take into account the combined impact of conflict, climate and environmental factors in specific localised contexts, alongside socio-economic vulnerabilities, gender norms, political dynamics, and the governance and management of natural resources. Aid actors must understand how environmental variability and livelihoods are inextricably intertwined, and furthermore should have an understanding of how governance enables or constrains adaptation. While climate variability and land degradation are contributing factors to conflict, conflict also undermines effective and inclusive environmental governance. All of this requires more cross-silo thinking (e.g., aid organisations should engage more closely with both environmentalists and conflict specialists) and especially greater emphasis and value placed on local knowledge and understanding of context, including traditional coping mechanisms and historic environmental governance mechanisms (bearing in mind that at times these may also perpetuate gender norms and power imbalances).

Institutional memory and sector-wide learning. There are lessons that have emerged over many years from these contexts which can provide valuable insights for aid actors to further inform how they tailor their approaches to further take these highly contextualised dynamics into account. The aid sector, however, does not tend to adequately resource or invest in institutional memory. Organisations at all levels within the system (from donors through to local NGOs) tend to be short-staffed, with a heavy focus on implementation over learning and analysis. Those organisations run by international staff tend to suffer from high turnover, and those run by national staff tend to be under-resourced. There is no sector-wide coordination or advisory function currently filling this gap in Sudan. Indeed, many of the factors which may undermine conflict sensitivity (e.g., short term programme cycles, high staff turnover and associated effects on institutional knowledge and relationships) are also at odds with an approach which is responsive to environmental and climate change risks.

Box 3. Examples of climate security/environmental peacebuilding related programming

Recognition of the intersection of climate change, conflict and environmental degradation has led to attempts to pilot integrated programming which has specific objectives related to combined outcomes.

For example, the Wadi El-Ku Catchment Management project in North Darfur piloted by Practical Action, UNEP and community-based organisations (CBOs) combined rebuilding environmental governance, community-based natural resource management and climate adaptation interventions as a platform for strengthening peace and improving relationships between farmers, pastoralists, communities and local government.

Another example focusing on gender-responsive approaches to natural resource management for peace in Al Rahad in North Kordofan was undertaken by UNEP, UN Women and UNDP, working at the convergence of several factors including shifting socio-economic and political dynamics among pastoralist groups as a result of environmental and climate changes and the specific gender dimensions of these changes.⁶⁸ The project demonstrated that natural resource management and governance initiatives are a strong entry point for women's empowerment in peacebuilding.⁶⁹

Key components to these projects include: incorporating a strong conflict sensitivity lens from the start alongside a strong understanding of specific environmental and climate change adaptation needs; participatory planning which is inclusive of all groups; bridging different levels, including governance across local, state and national levels; and cross-silo working which combine climate adaptation, environmental governance and peacebuilding objectives.

Integrated approaches to designing aid programming. There is an increasing emphasis on cross-sectoral approaches in global aid discussions, and also lessons from previous aid responses in Sudan. Working in a context of climate change and conflict requires a mix of skills – those used to working in drought or flooding responses need to merge approaches with those experienced in addressing conflict and building peace. Greater understanding of climate variability has brought more of a focus on disaster risk reduction, preparedness for climate shocks, resilience and adaptive capacity – strengthening conflict sensitivity must also be a fundamental part of all of this. Greater attention towards early warning and prevention can be key, including increasing forecasting capacity, pre-positioned financing, and anticipatory action (the Central Emergency Response Fund (CERF) provides allocations of this kind as a priority area, according to OCHA⁷⁰). Furthermore, where possible aid actors should go beyond prevention to proactively favour more transformative approaches which are both conflict-sensitive and environmentally sustainable, for example, by intentionally incorporating longer-term peacebuilding goals or by internationally integrated approaches that support environmental regeneration and sustainable management of natural resources. Climate security related programming is a new but emerging field, and recent pilots in Sudan have illustrated the opportunities that may be presented by such programming (see Box 3). Specific entry points for addressing combined risks are further identified in more detail elsewhere (for example, the Climate Security Expert Network's Climate-Fragility Risk Brief for Sudan⁷¹).

⁶⁸ UNEP, UN Women & UNDP, 2019.

⁶⁹ UNEP, UN Women & UNDP, 2019.

⁷⁰ Peters & Dupar, 2020

⁷¹ adelphi, 2020

Targeting and inclusion. The specific intersectional needs of children, women, and socially disadvantaged groups (including pastoralists, ethnic and religious minorities, and disabled groups) and how these groups are differentially and disproportionately affected by conflict, climate variability and environmental degradation need to strongly inform climate-sensitive and environmentally sustainable relief and development.⁷² The exclusion of pastoralists from aid programmes in particular has been identified as a failure of humanitarian and development programming in Sudan (see Box 4).⁷³ Influenced by the predominant media narrative about conflicts in Sudan as being between ‘Arab’ and ‘Africans’ or between ‘farmers’ and ‘herders’, many humanitarian agencies have often viewed farmers and pastoralists in isolation or in competition with one another, when in fact they have historically had symbiotic livelihood systems and often peaceful relationships.⁷⁴

While inclusivity is part and parcel of the humanitarian principles of humanity and impartiality, it also has peacebuilding implications.⁷⁵ In their briefing paper about participation in integrated natural resources management (INRM) projects, Satti, et al., 2021 found that relationships between farmers and pastoralist in North Darfur have been significantly damaged by conflict. One of the key motives for participation in INRM was to restore the damaged relationships between different users through establishing mechanisms and rules for peaceful sharing of natural resources. However, this can only be achieved by involving both groups in the decision-making structures established as part of INRM intervention, and by distributing natural resources services in an equitable way for different users.⁷⁶

Aid’s impact on the environment. Aid programming can be heavily resource intensive, with the potential to increase stress on local natural resources such as water, land, food, grazing, and charcoal. A reliance on dirty and nonrenewable energy may also contribute to environmental degradation, such as massive diesel-powered generators, and the generation of large amounts of non-biodegradable pollution through items such as single-use plastic water bottles. The carbon footprint of the aid sector is also significant, particularly in areas where expatriate aid workers qualify for rest and relaxation (R&R) flights on a frequent basis. While some level of environmental footprint is necessary, the aid sector is not doing all that it can do to reduce its own impact. For example, many years of experience in Darfur have raised important questions and lessons around wider relief practice and its impact on the environment (e.g., in a report published by Tearfund in 2007).⁷⁷ UNEP and OCHA have developed the ‘environmental marker’ methodology for assessing environmental impact of the humanitarian response in Darfur, requiring participants to demonstrate that a basic level of environmental mitigation has been undertaken (i.e., consideration of

Box 4. Inclusion Spotlight: Pastoralists

Twenty years after the eruption of the conflict in Darfur, poor engagement with pastoralists by humanitarian and development agencies has not changed much as most agencies focus on IDPs, who are predominantly farmers. This failure to acknowledge the vulnerabilities of pastoralists tends to be based on assumptions that pastoralists are better off than farmers. Indeed, Young & Ismail, 2019, found that, in Darfur, pastoralists are better off than farming communities in terms of livelihood asset ownership. However, the poorer segments of the farming and pastoralists communities are quite similar in terms of their asset ownership and the low-income activities they are involved in. Neither farming nor nomadic communities are egalitarian and there is a persistent inequality within both of them, and that implies a need for a more inclusive targeting of the poorest amongst both groups.

⁷² Peters & Dupar, 2020

⁷³ Satti, et al., 2020

⁷⁴ Young & Ismail, 2019

⁷⁵ Satti, et al., 2021

⁷⁶ ibid

⁷⁷ Tearfund, 2007

environmental and climate risks – see Box 5).⁷⁸ The requirement is ongoing, under the supervision of sector leads. Its effectiveness as an accountability mechanism largely depends on the individual sector lead's ability and will to use it as such. More attention should be paid to lessons and improving aid practice – particularly based on specific contextual experience and relationships. Other options explored in global discussions on greening operations include establishing in-house environment and energy experts to champion the development and implementation of environmental policies.⁷⁹ The ICRC has devised 'guidelines on the protection of the natural environment in armed conflict', and International Humanitarian Law can provide a framework itself for environmental protection, for example, by designating areas of biodiversity as demilitarised zones.

Box 5. Environmental Marker

According to environmental marker guidance produced by OCHA and UNEP, each humanitarian project is required to identify its potential impact on the local level in relation to environmental and climate risks, and address it in a manner which is tailored to the specific country.⁸⁰

Over the past eight years, efforts have been taken to 'mainstream' this at the strategic and programming/planning level in Sudan via the Humanitarian Needs Overview and the Humanitarian Response Plan. Since 2019, there has been an environmental context question included in the HRP project system, requiring organisations to explain how they are addressing or considering environmental issues (including climate risks) in their humanitarian operations in Sudan. UNEP has further collaborated with OCHA and Sector Coordinators to support the project review process against the environmental marker.

UNEP has also provided operational level support to the Sudan Humanitarian Fund (SHF) and other funding strategies and mechanisms to include environment and climate change both in funding requirements and through environmental screenings (i.e., use of an adapted environmental mainstreaming approach and mitigation measures) at the project level. UNEP has also supported the creation and sharing of environmental data for use in humanitarian analysis.

Such multi-sectoral approaches hold promise; however, further engagement is needed to extend the impact and ensure that such initiatives do not become tick boxes. This includes follow up on project reviews to assess the degree that recommendations have been taken into consideration, further advocacy and awareness-raising on environmental and climate change risks and adaptation needs, and support for training on environmental screening.

Linking local, national and global accountability. While ensuring accountability to local communities is critical, it is also important to go further and to realise the role that the aid sector can play in ensuring that national and global fora in relation to climate change and the environment are accountable to local communities. Lessons from aid operations in specific local environments can help to promote coherence across global humanitarian, development, peacebuilding, environment and climate approaches. This is also important to inform understanding of the reality of what it means to translate global and national commitments into practical action at local levels – including the potential to aggravate conflict and to reinforce inequality via top-down approaches. Initiatives such as the Climate Security Mechanism (which is intended to support collective analysis and action to address links between climate change, peace and security within the UN system⁸¹) have

⁷⁸ Reliefweb, 2016.

⁷⁹ Peters & Dupar, 2020

⁸⁰ OCHA & UNEP, 2016

⁸¹ Albrecht, 2021.

contributed to more joined up thinking and action. However, global discussions around reforming the aid sector to adequately address the links between climate change, environmental degradation and conflict (for example, as detailed in an ODI briefing note⁸²) require concerted engagement to reinforce understanding of how the aid sector can better contribute to solutions and ensure accountability.

c) Environmental peacebuilding and climate security related programming: A longer-term perspective

‘Environmental peacebuilding’ (including specific climate-security related programming, as described in Box 3) describes processes by which actors attempt to promote peace through more environmental cooperation, better and more integrated natural resource management, enhanced climate change adaptation and disaster risk reduction.⁸³ The premise upon which these interventions are developed is to shift the focus from the role of environmental issues in fuelling conflicts towards the role of environmental cooperation in transforming conflict and enabling collaborative relationships.⁸⁴

There is a growing body of evidence to illustrate how aid actors involved in environmental peacebuilding in Sudan can achieve positive contributions towards promoting peace within their target geographical areas. This includes addressing the combined issues of climate change adaptation, environmental sustainability, and conflict through different integrated strategies, including supporting relevant traditional peacebuilding mechanisms, addressing or removing environmental threats, addressing the issues of poverty and lack of livelihood options,⁸⁵ or promoting inclusive governance of natural resources.

While most environmental peacebuilding projects use a combination of interventions to enhance communities’ resilience to conflict and climate change,⁸⁶ there are also projects that indirectly address the issues of climate change and conflict.⁸⁷ For example, some projects aimed to encourage conflicting communities to cooperate by addressing environmental issues as well as delivering peace dividends to communities by improving social services of health, education and water.⁸⁸ These projects succeed when they are able to build relationships between different communities, and between communities and governance structures.

A component of successful environmental peacebuilding interventions is their ability to build relationships between communities and reduce the incidence of localised conflicts over natural resources. Such networks facilitate dialogue between different users of natural resources and allow them to collectively make decisions about the effective use of their shared natural resources. These efforts should ensure positive inclusion of women, young people, and other marginalised groups in the various decision-making forums established for peacebuilding and natural resource management.⁸⁹

This networking is complemented by technical interventions like dam construction and livelihoods support in the form of agricultural extension, animal vaccination, livestock migratory route demarcation, reforestation and improved seed varieties distribution. Moreover, decision-making platforms usually include participants from governments at the local level to ensure technical and

⁸² Peters & Dupar, 2020.

⁸³ Ide, 2019

⁸⁴ Herbert, 2019

⁸⁵ Bronkhorst, 2011

⁸⁶ Corbijn, et al., 2020; UNEP, 2020; Bennett, et al., 2013

⁸⁷ Practical Action, 2012

⁸⁸ UNDP, 2019

⁸⁹ UNEP, 2016

financial support.⁹⁰ Some environmental peacebuilding interventions gave special consideration to the vulnerability of women and young people to climate change and conflict by enhancing their access to natural resources and supporting them with alternative livelihoods through vocational training.⁹¹

Besides the institutional and technical rigour, some interventions benefited from having a very good understanding of the local realities. Important lessons could be learnt from the national NGOs of Darfur Development and Reconstruction Agencies (DDRA) and SOS Sahel Sudan who, instead of considering farming and pastoralism as inherently conflicting livelihoods, recognise the complementarity between pastoralism and farming within a wider socio-ecological system.⁹²

The way forward and recommendations

Conflict, environmental degradation and climate change play an increasingly profound role in Sudan, leading to more humanitarian suffering, more deaths, protracted displacement, severe poverty and exacerbated inequality. Humanitarian, development and peacebuilding programmes cannot treat these as independent sets of phenomena with distinct responses. Climate change, environmental degradation, and conflict interact in complex ways, and aid that does not recognise this complexity risks contributing to conflict in the short- and long-term. The aid system should strive to avoid working in silos, and common objectives need to be created to strike a balance between responding to urgent humanitarian needs while adopting long-term strategies that enhances vulnerable communities' resilience to climate change and conflict.⁹³ There is also a need for coordination between aid actors active in different states and neighbouring countries, as in many cases the issues that need to be tackled are cross-border, particularly environmental issues.

In conflict-affected areas, aid actors should develop a context-specific and robust understanding of how environmental changes are interacting with intra- and inter-communal natural resource management. It is also important to take into consideration the link between localised conflicts and the national level of conflict in Sudan. This is particularly important in Sudan as different regions have different causes of environmental degradation and experience the effects of climate change differently; generalised conflict analyses are insufficient to understand these important nuances.

In order to transform the dire picture of intersecting climate change and conflict, the following recommendations are proposed, building on three overarching principles:

1. **Applied conflict analysis:** All actors should ensure that decision-making and programmes are based on and responsive to regularly updated conflict analysis that firmly takes into account environmental factors, including the effects of climate change. An understanding of how conflict, climate and the environment interact in specific contexts can help aid actors to ensure that they are conflict and gender sensitive, climate sensitive and minimise their environmental footprint/contribution to environmental degradation.⁹⁴
2. **Working across silos:** All actors should deliberately seek out, foster and facilitate engagement across diverse specialisms and expertise, bringing together environmentalists,

⁹⁰ UNDP, 2019; UNEP, 2020; Corbijn, et al., 2020; Practical Action, 2012; UNEP, 2014

⁹¹ UNEP, UN Women & UNDP, 2019

⁹² UNEP, 2014

⁹³ ICRC, 2020; Oxfam, 2021; Ibid

⁹⁴ According to Saverio Krätli, the chief editor of Nomadic People journal, "It is important to acknowledge the impact of climate change [...] but it is even more important to base the design and implementation of humanitarian interventions on a sound assessment of the legacy of non-climate stressors: the socio-economic processes that have been at work for decades with the goal of transforming people's livelihoods. Starting from altering the ways key resources are being accessed, and even the categories through which people can think about them; and of course including the adjustments different groups of people have made in the face of this legacy."

meteorologists, local academic knowledge, community expertise, local government representatives with aid practitioners and policy-makers. This will enable a better understanding of complexity and contextual nuances, and facilitate sharing of knowledge, more evidence/research, and redesigning approaches to be more peace positive, climate compatible and environmentally sustainable.

3. **Connecting understanding across local, national and international levels:** All actors should deepen understanding of the interconnected nature of conflict⁹⁵ and environmental dynamics, and also the nuances around how these dynamics interact across specific local or regional levels – particularly as transboundary challenges may be key for addressing systemic drivers of conflict. Thinking and working across different levels further enables aid programming to address issues around power, marginalisation and inequality, ensuring that communities have a strong say and understanding of high-level decisions and policies.

These principles can be applied in different ways in different areas of the aid sector. Some of these are suggested below, but more importantly, many will emerge through ongoing discussion and reflection. The CSF hopes to use this analysis to facilitate and draw out additional organisation- and sector-specific recommendations that can be practically applied in the coming months.

1) Invest in knowledge and cross-silo evidence and learning. The aid sector needs good information, at different levels and in different languages, to equip it to navigate these new dilemmas and evolving dynamics. This requires data, succinct analysis, respect for local knowledge, time for reflection, spaces for sharing lessons, and flexibility for adaptation. Specific ways that this can be built include:

- **More research is required to ensure that programming and strategic decisions are based on relevant data, up-to-date information, and contextualised knowledge:** This would help to stave off the potential for generalised assumptions/perceptions and to understand important nuances. Donors should consider funding more research to better understand some of the interlinked and evolving dynamics (conflict, climate change, environment) highlighted in this paper. How this research is gathered is also important, in particular the value placed on local knowledge and expertise, for example a research consortium with local universities to explore traditional and modern approaches to managing climate variability could be considered. More action research with practitioners is also required to move beyond theoretical realms and translate issues into local reality and practice. Further research is required on areas such as: how large-scale initiatives (e.g., mechanised farming, any large-scale green energy or adaptation plans) interact with environmental degradation, conflict dynamics and corruption; the impact of urbanisation; and shifting patterns of land use and natural resource governance as a result of environmental change and interaction with conflict and political dynamics.
- **Better expertise within the aid system:** Donors should be willing to fund specific analysts and advisers within the aid system including within consortia, clusters, or within organisations, whose job it is to help the aid sector understand and navigate complex dynamics around climate change, environmental degradation and conflict. Humanitarian clusters and development working groups should engage regularly with UNEP and other relevant organisations and experts with specialist environmental or climate expertise to foster greater understanding of aid programming interaction with environmental and

⁹⁵According to Helen Young, Professor and Research Director at Feinstein International Center at Tufts University, “in terms of addressing the institutional and policy gaps, it seems that national and local peace processes are tackled separately and are being conducted independently. The national level peace processes are not taking into account the local level conflict dynamics and how they are managed”.

climate factors, for example through targeted workshops or trainings which integrate conflict sensitivity. [OCHA and UNEP](#) should conduct advocacy and awareness-raising on mainstreaming of environment and climate change risks and adaptation needs in humanitarian planning and operations on both donor and partners levels.

- **Applying research to practice:** [Aid workers in the field](#) should work with their programme managers to actively incorporate the interaction between day-to-day aid delivery and natural resource management practices. [Country directors](#) should build in budget lines for analysis and knowledge to understand both the climate linkages and environmental impact of new projects. This analysis and knowledge should be firmly integrated within projects and reviewed regularly.

2) Build aid around inclusive engagement and community-led solutions. Local knowledge and expertise (e.g., traditional Sudanese livelihoods have shown their strengths in enabling adaptation to climatic variability and natural resource management) should be prioritised and placed at the centre of programme design and informing contextualised approaches. Supporting communities has the dual benefit of drawing on existing knowledge and tools, and also strengthening communities to challenge practices that contribute to climate change and environmental degradation locally.

- **Intersectional approaches are essential:** [All actors](#) should ensure that the specific intersectional needs of children, women, and socially disadvantaged groups (including pastoralists, ethnic and religious minorities, and disabled groups) and how these groups are differentially and disproportionately affected by conflict, climate variability and environmental degradation strongly inform climate-compatible and environmentally sustainable relief and development. [All actors](#) should look beyond assumptions and ensure that understanding of power dynamics and relationships within specific contexts inform the design of programming, particularly as assumptions around herder-pastoralist relations have at times resulted in exclusion and negative perceptions of aid.
- **Consult closely with communities:** Communities should be strongly involved in the design of programming. [Analysts](#) should actively work with communities understanding the history of and management of natural resources and how it has interacted with grazing patterns, planting, harvesting and migration patterns/routes. [Programme Managers](#) should plan for consultations with the communities where they are working to learn more about traditional and current land and natural resource management practices, the gender norms that influence these practices, and understand how their activities interact with these practices. Communities should have access to understanding around climate change trends.
- **Work with existing practices and mechanisms:** [Donors](#) could require new programmes to demonstrate specific understanding or analysis of localised contexts based on strong community engagement and building on, e.g., traditional livelihoods, natural resource management, environmental governance. [Programme Managers](#) understanding natural resource management practices should be able to identify risks forthcoming from their aid implementation and escalate for rectification/adjustment.
- **Explore platforms for cooperation and dialogue around these issues:** Climate change adaptation and environmental/natural resource management may provide valuable opportunities to empower marginalised groups, strengthen relationships and contribute to building peace.

3) Incentivise and enable good practice. Good practices often take additional time or resources to put into place. Those designing activities, whether donors or large UN agencies and NGOs, must

ensure that good practices are resourced appropriately, and that appropriate incentives and accountability mechanisms are in place. Resources and time should be dedicated towards learning.

- **Apply tools and specially designed markers:** Donors should actively encourage agencies to apply OCHA-UNEP environmental marker in programme development. UNEP and OCHA should provide more training and follow up and continue joint awareness raising. Sector Leads should use the OCHA-UNEP Environmental Marker process as a space for genuine due diligence and constructive feedback to agencies implementing under the HRP, as well as highlighting sector specific guidance. Programme Managers should actively apply this marker in programme design processes.
- **Tailor integrated global donor approaches:** Donors should ensure global commitments towards more integrated approaches are put into practice in Sudan. For example, the EU's integrated approach to climate change and security outlines a number of operational approaches to ensure that climate and security are integrated into relevant work. USAID's climate-resilience development framework **provides** guidance and learning on programmes where climate change and conflict have the potential to interact.
- **Invest time in learning and reflection:** Country Directors should support learning and reflection within organisations, across organisations, and based on historic programming experience to better inform understanding of good practice.
- **Tailored M&E:** Monitoring and Evaluation Officers should include indicators and track impact on environmental impact and practices using the Environmental Marker process.
- **New technology and pilot approaches:** Donors should ensure that innovative and pilot approaches are enabled through funding and support for the flexible means of operating that such approaches require (e.g., for environmental peacebuilding and climate security based programming). This would further support the building of an increasing evidence base specific to Sudan. Country Directors and Programme Managers should consider new technology, diverse collaborations or trialing of practices which have worked in other similar contexts.

4) Green the aid sector. The aid sector itself is a contributor to climate change, and bears a serious responsibility to minimise the harm it does through its fossil fuel emissions and contributions to environmental degradation. Its efforts to improve practices can have a positive spillover effect on improving the availability of climate-sensitive technologies and practices to local communities.

- **Environmental accountability and due diligence:** Donors should require agencies to prove that the carbon footprint of their operations in Sudan is reducing, giving examples of new initiatives. The Humanitarian Country Team should have a standing dedicated agenda point to review carbon footprint of sector whilst presenting and reviewing good practices. Existing global guidelines on environmental protection (e.g., ICRC guidelines on protection of natural environment, as enshrined in IHL) could be adapted and applied in Sudan.
- **Specialised expertise:** Country Directors can appoint Environmental Officers and Climate Advisers to ensure that programming and operations are well informed by specific expertise.
- **Invest in alternative green practice:** Operations Teams should prioritise solar technology such as photovoltaic systems and solar powered water heaters to power offices, projects, and responses, instead of a default reliance on fossil fuel powered generators. Operations Teams should look for alternatives to single use plastic water bottles or food packaging. Consideration should also be given to the carbon footprint of the items procured within the aid sector, considering shipping distances and practices of those producing the items as a component of procurement practices. Similarly, donors who require sourcing of programme

materials from their home country as a funding requirement should be challenged to consider the climate impact of such policies. Programme Managers should ensure field bases are as green as possible: Examples include solar power, composting kitchen and paper waste, cutting down on printing. The regular R&R flights of international staff also contribute to climate change. The consideration of adaptive policies that incentivise more local and or reduced distance flights for R&R could help mitigate these impacts.

5) Ensure high-level discussions are informed by local realities and knowledge. Much of the discussion on climate change trends and adaptation/mitigation measures happens in high-level policy spheres. However, it is important that local communities participate in global and national decisions so that these are informed by evidence and expertise. Communities and local-level institutions have a critical role to play in providing sustainable adaptation measures and natural resource management, particularly because of the way that the effects of climate change may interact with conflict dynamics in complex ways.

- **Conflict-sensitive climate change policies and action:** The Government of Sudan and Donors should ensure that the National Action Plan (NAP) for climate change adaptation is conflict-sensitive and reflects the different local contexts across Sudan. Nationally implemented climate change adaptation and mitigation measures must be conflict-sensitive and therefore should be tailored to the nuances of different local contexts, especially how climate change may impact people unequally and interact with conflict dynamics in different ways.
- **Environmental policies and natural resource governance are inclusive and strengthen relationships:** All actors should ensure that their implementation is conflict-sensitive and makes the most of opportunities to achieve peacebuilding outcomes. Manuals for environmental adaptation should be conflict-sensitive.
- **Communities drive climate response:** Donors and all aid actors should ensure that communities are at the forefront of the design of climate adaptation and mitigation, including related aid programming. They should further support community representatives to access and influence global discussions to foster greater understanding of the effects of climate change, including its implications for conflict dynamics.

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