

# Climate, Environment and Security in Sudan

Sudan has been affected by conflict and civil war for decades and continues to be insecure, particularly in regions bordering newly independent South Sudan and in Darfur. Long-term planning for climate change may not seem relevant or feasible in conflict and emergency situations. However, quick fixes (e.g. political agreements) to long-running conflicts in Sudan have not always materialised or proved lasting, so dealing with long-term issues and underlying causes of conflict is crucial. This case study argues that programmes promoting climate resilient development would be beneficial in fragile and insecure areas of Sudan. Long-

term thinking is important to address the underlying causes producing and sustaining conflict. Environmental issues, including climate variability and change, are often relevant stress factors that should be addressed. Existing traditional responses to climate variability and NGO and donor interventions on climate change and conflict provide some lessons on how to operate in difficult environments. The success of fuel-efficient stoves programmes in camps for internally displaced people (IDPs) and refugees indicates that low carbon development can also play a constructive role in conflict-affected areas.

## Climate change *can* be tackled in conflict states by...

- integrating climate change adaptation with wider development and peace-building processes. Technical approaches to environmental security managed without appreciation of social and political tensions and recognition of the complexity of conflict areas risk failure, irrelevance or doing harm. This is not least because climate adaptation measures (e.g. migration, expansion of agriculture) employed by or for one social group can negatively impact on others.
- taking a three-pronged approach to building climate resilience in conflict areas: (1) facilitating conflict resolution; (2) managing environmental conditions and; (3) tackling vulnerability and exclusion (see SECS' Water for Peace project described in Text Box 1).
- promoting use of fuel-efficient stoves in camps for refugees and internally displaced people (IDPs). Stove programmes reduce the need for firewood collection, which saves people time and effort and can lessen vulnerability to attack in dangerous places. The stove programmes also lead to reduced deforestation, lowering stress on the local environment.

## Learning lessons from Sudan

### 1 Climate resilient development (CRD) and, to a lesser extent, low carbon development (LCD) are of relevance to conflict-affected areas in Sudan

Both CRD and LCD demonstrate value in their own right, even though it remains unclear how much potential the initiatives have in contributing to longer-term processes of change. In this context, it may be more realistic not to expect CRD and LCD to be joined up.

### 2 Long-term thinking and planning in conflict situations is challenging but important

It might be too much to expect LCCRD to take place in the most severely conflict-affected areas because of security threats, instability and the need for emergency response. However, the history of long-running conflicts in Sudan indicates that quick fix solutions may not be forthcoming, so long-term efforts to address underlying causes of conflict will be of benefit where possible. As a long-term process, building climate resilience should be part of this strategy.

### 3 A nuanced case can be made that climatic factors add stress to already fragile and conflict-affected areas in the Sahel of Sudan

Understanding the causes of conflicts is the first step towards designing responses to them. The extent to

which climate change is deemed relevant to conflict will determine the extent to which LCCRD is prioritised. While the narrative of environmental security threats and reports such as the UNEP's 'post-conflict vulnerability assessment' for Sudan (2007) are controversial, it is clear that drought and land degradation are relevant issues.

## The need for long-term responses to conflict in Sudan

Sudan has been seriously affected by violence since independence in 1956. Civil war between the North and South occurred between 1956–72 and 1983–2005, which left perhaps 1.5 million people dead and led to independence for South Sudan in 2011. This region remains unstable amid political disputes over territory in the Abyei region and controversy over arrangements for oil exports. Since 2003, conflict has affected Darfur, in the west of Sudan, where perhaps 200,000 people have died and 2 million people have been forced from their homes.<sup>1</sup> Intermittent local conflicts have been present in Darfur for at least 30 years (UNEP 2007). Conflict has also been present in East Sudan, where a peace agreement was reached in 2006.

Conflict has been a long-term problem for Sudan and may continue to be a problem for the long-term future. This means that development assistance frequently fails to integrate long-term thinking in areas affected by major conflict activity for a number of reasons:

- Development actors tend to engage in emergency response to alleviate the immediate human suffering that conflict produces.
- Security threats can make non-emergency projects look too risky.
- Uncertainty produced by social instability and malfunctioning systems of government makes long-term planning more difficult.

Development assistance needs to consider long-term scenarios and address possible underlying causes of conflict, as well as more immediate concerns. But with development actors understandably concerned with short-term priorities in major conflict zones, climate change adaptation or climate change sensitivity is likely to be viewed as beyond the range of action deemed possible.

However, to move beyond dealing with symptoms, or beyond the crisis situation, attention to, and action on, the deeper problems that produce and sustain conflict will be very important. For example, according to the United Nations Environment Programme (UNEP) (2007), reliance on food and emergency aid in Sudan is creating a vicious cycle of food aid dependence, agricultural underdevelopment and environmental degradation.



Carrying firewood outside an Internally Displaced People's camp in Gereida, Darfur

Reducing food aid to encourage a return to agriculture would likely cause food insecurity and land degradation, leading to a high likelihood of failure. There is not an obvious way out of this situation but thinking through to the long-term is the only way to find solutions. Climate change and environmental change are evidently long-term factors, so the next question is whether climate change is relevant to the conflict situation.

### Are there links between climate change, environmental change and conflict in Sudan's Sahel?

A major report from UNEP in 2007 argued that environmental issues such as land degradation, deforestation and climate change are threatening the prospects of long-term peace and food security in Sudan. In Darfur, UNEP maintained that 'complex but clear linkages exist between environmental problems and the on-going conflict' (UNEP 2007). According to the UNEP, overgrazing, deforestation and drought in Darfur have reduced vegetation cover and the quality of topsoil. With most people's livelihoods closely related to access to natural resources, this has led to increased competition for water and fertile land. In a situation of lawlessness, historical tensions and declining respect for traditional authority, environmental degradation and resource competition makes conflict more likely.

The UNEP's report has been contested on several fronts. Critics have argued that:

- The UNEP's focus on environmental factors is a distraction from the more serious political motivations behind violence, which may be unrelated to resource scarcity and competition and more to do with economic, ethnic or historical factors. However, the UNEP does make clear that where environmental and natural resource issues are important to conflict they are generally contributing factors only.
- The UNEP's claims about desertification rely on limited data of dubious quality, mostly anecdotal evidence and small-scale studies (Young *et al.* 2009).
- Environmental degradation is a relative and political term: one person's degraded landscape could be another person's functioning livelihood system.
- Desiccation of the Sahel has been caused largely by climate variability, including three decades of near-drought conditions, rather than population pressure or over-grazing, a conclusion supported by evidence of greening of the Sahel as a result of higher levels of precipitation in recent years (Young *et al.* 2009).

These points indicate that the narrative of human-induced desertification should not be accepted as scientific fact when the evidence base is thin, especially if the narrative is used to justify restrictions on resource use among some groups for political motives. Interventions aiming to enhance the environment or build resilience to climate change need to be based on credible evidence and an appreciation of the wider political, social and economic context in order to address conflict, because these are the factors that typically play the more prominent causal roles in conflict situations.

Overall, the criticisms do not dislodge the central argument that effective responses to climate variability and change in the Sahel of Sudan could be an important part of long-term peace-building efforts. A key point of evidence is that three decades of low rainfall and periodic severe drought has been a stress factor in the region in the past. Questions remain about just how important climate change is in these areas compared to other problems and, in view of that, whether building climate resilience is a priority, given limited resources. If it is deemed a priority, then the following sections outline how low carbon climate resilient development (LCCRD) could operate here.

### Learning from traditional responses to climate stress

Osman-Elasha (2008) documents responses to climatic stress employed by pastoralists and farmers in Darfur. Pastoralists have employed methods that include: practising small-scale agriculture; moving to cities for employment (which may aggravate vulnerability if lacking education and skills); migration in search of water and fodder; and selling some of the herd. Agricultural farmers' responses to drought include: construction of terraces for water harvesting; grain storage; marketing during seasons of good production; and using social organisations, such

### Text Box 1: Water for Peace: addressing conflict, the environment and vulnerability

The Sudan Environmental Conservation Society (SECS) has developed a project called Water for Peace in villages in South Kordofan where competition over water resources is a key conflict issue. According to SECS, government service providers such as the Rural Water Corporation have limited capacity, and administration has been affected by the civil war. The Water for Peace project aims to provide affordable water with separate supplies for human and animal consumption. The project also works to re-establish traditional social structures for conflict resolution and to reduce inequalities and exclusions in access to and control of water resources. In this way, the project supports conflict resolution, improved environmental management and reduces vulnerability and exclusion, three important components for conflict-sensitive climate resilient development (Bronkhorst 2011).

as work parties. Traditional adaptation measures like these will probably form a basis for external interventions on climate change adaptation in Sudan.

However, traditional adaptation measures have proved insufficient to avert severe losses during drought periods. For this reason, introduced technologies are likely to have a role to play too. Furthermore, adaptation measures sometimes entail problematic impacts on other groups, contributing to tensions. Most notably, tensions over land use can arise due to pastoralist migration in search of water and fodder and due to farmers' construction of terraces for water harvesting, which encourages agricultural expansion in land previously used as seasonal pasture. Thus, conflict sensitivity is required because adaptation measures (e.g. migration, expansion of agriculture) employed by one group can have negative impacts on people elsewhere.

### Learning from NGO and donor programmes on climate change

A review of NGOs dealing with climate change and conflict issues in South Kordofan – a state neighbouring Darfur and South Sudan – found that there were three main types of activity promoted (Bronkhorst 2011). First, NGOs frequently support traditional and interactive conflict resolution mechanisms. Second, some NGOs address or remove environmental threats, often drawing on environmental management approaches or technologies such as provision of alternative water sources, hardier crop varieties or creation of new livestock migration routes. Third, NGOs engage in development projects designed to address vulnerabilities and exclusions such as poverty and lack of livelihood options, with special support for excluded groups such as women and youth.

Bronkhorst's report does not assess the effectiveness of these multiple interventions in South Kordofan in depth because it is substantially a review of activities, rather than an evaluation. Yet the report argues persuasively that

these three sets of activities – conflict resolution, removing environmental threats and addressing vulnerabilities – will be core elements of any strategy for building climate and conflict resilience in the area (Bronkhorst 2011). There may be opportunities to learn from these projects. Additionally, the pilot implementation projects for Sudan’s National Adaptation Programme of Action, currently being supported by the United Nations Development Programme, can be expected to produce important lessons. Many of these pilot projects prioritise reduction of conflict between tribal groups. Text Box 1 provides an example of an NGO project worth learning from.

## Looking for low carbon: Stove solutions for IDP camps in Darfur

Areas around large camps for internally displaced people (IDPs) and refugees from Darfur have often suffered from environmental degradation as a result of the influx of people. In particular, securing firewood for cooking and energy needs has often led to increased deforestation and environmental stress. Consequently, people (typically women and children) find they have to travel long distances to collect firewood if they are unable to purchase it, costing time and effort and endangering their security because of the threat from armed groups (or if the security threat is too great then there may be fuel shortages). In Darfur and neighbouring Chad, solar cookers, fuel-efficient stoves and liquefied petroleum gas (LPG) cookers have been distributed through aid organisations and through supported markets, helping to ease pressure on the environment and to reduce the number of trips needed for firewood collection and to reduce women and children’s vulnerability to attack.

In narrative terms, these programmes have the potential to be framed as low carbon development because the stoves lead to reduced emissions from wood burning. The advantage of this framing is that carbon finance could be secured for the projects, as happened for LPG cookers in Darfur (Eltayeb 2010). On the other hand, the advantages of successful schemes for the people using and making the stoves (e.g. time saved, health benefits, improved security) and for the local environment in the conflict situation are probably more significant positives than the small carbon savings generated.

1 BBC, ‘Sudan Profile’, updated 29 November 2011, [www.bbc.co.uk/news/world-africa-14094995](http://www.bbc.co.uk/news/world-africa-14094995).

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## Further reading

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## Authorship

This *Case Study* was written by Robbie Watts, a Research Assistant at IDS. It complements the Climate Change in Difficult Environments Learning Cycle of the Learning Hub. The opinions expressed are those of the author and do not necessarily reflect the views of IDS.