

Managing Climate Change and Conflict in Mali

Climatic variability is not new for the people of Mali, who have various coping strategies to help reduce their vulnerability to climatic stress, especially drought. A history of tensions between resource user groups and conflict between pastoralists and the government of Mali enhances the need for development and adaptation which is tailored to local contexts and sensitive to conflict issues. Climate

change does affect these conflict situations, yet they are more substantially related to social and political factors. These broader forces will need to be considered and, if possible, dealt with in order to achieve conflict-sensitive climate change adaptation. This case study highlights the importance of incorporating local knowledge and practices into institutional responses to climate change.

Building climate resilience in conflict-affected areas needs to...

- make use of existing knowledge and practices. Interventions that are sensitive to local situations and built around people's livelihoods will reduce the possibility of provoking or exacerbating conflict situations (Djoudi et al. 2011). This also means recognising that migratory pastoralism can be an effective livelihood activity, given Mali's climatic conditions.
- focus on improving links between national and local levels; particularly through building relationships with cooperative community groups and institutions. Climate change programmes need to account for context-specific political economies in implementation
- areas and recognise that formal and informal institutions often play important roles in conflict resolution at local levels.
- learn from the past. Current plans for economic 'modernisation' through agricultural expansion need to demonstrate more resilience to a range of different climate scenarios.
- deliver and learn from pilot projects because of the limited capacity in conflict-affected countries. Implementation in Mali is currently very limited as finance and capacity building are needed to support climate adaptation initiatives and/or low carbon development.

Learning from Mali on conflict and context-sensitive responses

1 Climate variability is a long-standing feature of the region
People already have knowledge of techniques and measures that help them adapt to an uncertain future climate and it is essential that such knowledge is the starting point for conflict-sensitive climate responses.

2 Climate variability and climate change have implications for the sustainability of some economic development projects such as expansion of agricultural irrigation.

Expansionist projects developed in the 1960s failed during the dry periods of the 1970s and 1980s and increased the vulnerability of marginalised groups (such as displaced farmers and pastoralists) to drought.

3 Long-standing conflicts such as the Tuareg rebellion are complex and highly political and are not readily explained with an environmental security narrative

Furthermore, where environmental security is relevant, it is typically socially and politically constructed. Climate change adaptation will only begin to address the main issues in conflict situations by considering the wider political economy.

4 Formal and informal institutions at the local level are central to conflict resolution

Disputes between land users are often resolved through town halls and the court system. Conventions for agreed land-use practices can be helpful provided they are kept updated. Inter-community meetings proved successful in bringing some stability to Northern Mali in the mid-1990s in the context of the Tuareg insurgency.

5 Mali is vulnerable to climate change impacts and conflict situations but so far these problems have not been addressed in joined up programmes

Climate change adaptation is still at an early stage in Mali and the National Adaptation Programme of Action does not substantially address conflict issues. There is only very limited experience of low carbon development.

Climate variability and change in Mali

Mali is characterised by semi-arid to arid conditions with seasonal rainfall distribution. An important climatic feature is high annual and decadal variability in precipitation. Some commentators have attributed desertification and environmental degradation to human activities on the ground. On the other hand, fluctuation of the desert boundary could be the natural outcome of long-term climate variability, a view supported by evidence of recent 'greening' that correlates with years of above average rainfall.

Temperatures in the region are expected to rise due to global warming – the mean temperature for Mali has already risen 0.7°C since 1960 – but there is little agreement between climate models on future patterns of precipitation. Dams, water abstraction and deforestation will combine with rainfall variability and other features of climate change to influence water availability and the viability of different types of livelihoods, yet the nature and degree of future change remains highly uncertain (Goulden *et al.* 2011).

Explaining environmental vulnerability and conflict

The degree to which environmental change affects conflict remains disputed: an environmental security narrative tends to emphasise perceived effects of environmental change or degradation on conflict; other scholars

The Niger Basin in Mali

- Periods of severe drought have resulted in diminished land and water resources and stress on livelihoods.
- Food insecurity is a recurring problem: according to the World Food Programme, 3 million people in Mali are vulnerable to food and nutrition insecurity as of January 2012.
- Conflicts between resource users are relatively common, particularly between agricultural farmers and pastoralists.
- Violent conflict associated with Tuareg rebels continues to affect the north of Mali.

emphasise political economy factors (Benjaminsen 2008). Climate change and environmental stress in Mali are best seen as possible contributory factors to conflict, while recognising the complexity of conflict situations and resisting simplistic attributions of causality to them.

Conflicts of varying severity between agricultural farmers and mobile pastoralists are quite common in Mali at local levels. They can occur when there is crop damage by livestock and in cases of changing land-use practices and changing regimes of access to water resources. Proximity of livestock to cropped fields increases this conflict risk

The Tuareg rebellions in Northern Mali

The history of conflict in Northern Mali can be traced back to the early twentieth century, when nomadic Tuareg violently resisted French colonial occupation, and can be traced onwards in episodic violence and unrest through to the present day. The conflict has been associated with, among other things: sedentarisation policies which the Tuareg interpreted as hostile colonialism; repressive use of force from the government; marginalisation of pastoralists due to agricultural expansion (see Text Box 1); wider regional instability in Niger, Algeria and Libya; impositions of fines for access to natural resources (supposedly to prevent environmental degradation); drought; perceptions of government embezzlement of international relief aid for drought; exposure to revolutionary discourse; and domestic political instability.

The severe droughts of the 1970s and 1980s had an impact on the Tuareg rebellion of the early 1990s but complex historical and political factors and regional instability were more significant determinants of insurgency in Northern Mali than environmental stress (Benjaminsen 2008). Furthermore, environmental stress is itself determined by complex historical and political factors that regulate resources and access to them. Thus, if climate change adaptation has any part to play in peace-building for this conflict-affected region then it will have to engage with the local political economy in a sophisticated manner. Working alongside cooperative community groups would be a good way to start: during a lull in violence in 1995 and 1996, inter-community meetings eventually proved effective in ending the rebellion, albeit not permanently. These meetings largely bypassed rebel leaders and government and army officials and were facilitated by the UNDP, the Norwegian government and Malian members of Norwegian Church Aid (Benjaminsen 2008).

and is thus related to patterns of movement among nomadic and transhumant pastoralists. As proponents of an environmental security narrative emphasise, drought, desertification and land degradation can cause pastoralists to migrate to agricultural areas, provoking farmer–herder conflict. This in turn may be related to climate change.

However, **environmental conditions ought not to be considered in isolation from politics and history**. There is a common perception among politicians that mobile pastoralism is incompatible with modernisation and development, which results in policies that tend to increase pastoralists' marginalisation and reduce their access to grazing land and water resources. Land tenure reforms since the 1970s have tended to promote private ownership of land rather than common property rights, which favours agricultural expansion over pastoralism (Goulden *et al.* 2011). This is despite evidence of the high adaptive capacity and ecological-economic efficiency of mobile livestock systems in the Sahel (Djouidi *et al.* 2011). Hence vulnerability to environmental conditions is bound up with social and political forces. Furthermore, environmental vulnerability is likely to be just one causal factor among many in conflict situations.

Bridging national and local climate adaptation for conflict sensitivity

Mali's National Adaptation Programme of Action (NAPA) was completed in 2007, led by the Ministry of Environment and supported by the United Nations Development Programme. According to government representatives involved in the Mali NAPA process, the initiative brought several benefits including an increased visibility of climate change issues within the government, raised awareness of climate change and existing adaptation measures among the population and the creation of a planning tool. However, there is a lack of financial resources and staff capacity to implement projects (Goulden *et al.* 2011). For this reason, institutional adaptation responses are still at an early stage in Mali and lack of capacity hinders the development of a sophisticated conflict-sensitive approach from which this case study might draw more lessons. Conflict sensitivity is not substantially addressed in the NAPA.

Some international NGO representatives have commented that even though the NAPA mentions the need for local participation and consideration of local realities, the proposed actions do not reflect this and many local government officials are not even aware of the NAPA's existence (Djouidi *et al.* 2011). This is problematic for attempts to integrate community level responses to climate stress that local populations have already developed as a means of coping with climatic variability.



Al-Husseini, a Tuareg, guarding his cattle with an AK-47 rifle in the remote and insecure area north of Gao

Climate variability and agricultural expansion

During wet periods in the 1950s and 1960s, agriculture was expanded, intensified and commercialised so as to promote economic 'modernisation'. This assumed that the high precipitation climatic conditions would remain more or less constant in the future. However, the 1950s and 1960s proved to be anomalously wet; the drier conditions of the 1970s and 1980s made the agricultural expansion unsustainable. Furthermore, the expansion marginalised migrant pastoralists who were pushed further into the desert fringes and were less able to sustain their livelihoods when the high rainfall period came to an end. The famine conditions in the Sahel that ensued during the droughts of the 1970s and 1980s should therefore be seen in the context of maladaptive development policies and projects which ignored climate variability and increased social vulnerability to drought (Goulden *et al.* 2011).

This historic failure highlights that development planning needs to accommodate climatic uncertainty in order to cope with a range of very different possible futures. Food insecurity merely heightens the stakes. Projects designed to enhance agricultural and economic productivity – such as the large-scale irrigation projects for sugar and rice production currently planned for the Ségou region or the agricultural climate adaptation options outlined in Butt *et al.* (2006) – ought to be capable of adapting to changing circumstances in order to reduce their risk of failure. Furthermore, displaced land users who lose out from the projects should receive fair compensation. To the extent that development intervention can assist with lowering food insecurity and supporting land access or fair compensation for its loss, it may be able to contribute to adaptation objectives in conflict-sensitive ways.

These responses are often based on diversified livelihood activities such as: sowing seeds in multiple fields which are kilometres apart as a risk-spreading strategy; the use of planting pits, micro-dams and catchments; and the construction of soil ridges and stone lines for soil and moisture conservation (Goulden *et al.* 2011). Mechanisms for resolving conflicts also exist at local levels, making use of social networks and formal and informal institutions (e.g. town halls, courts, village committees) for enhancing cooperation and settling disputes.

According to Goulden *et al.* (2011), **adaptation to climate change in Mali will be most effective if it recognises traditional techniques and practices** and combines them with appropriate technological and managerial interventions rather than seeking to replace them with 'modern' systems. These authors present some examples of where external interventions support autonomous local decision-making. In one case, rain gauges have been distributed to villages throughout Mali and farmers have been trained to collect rainfall observations which are then used to provide advice in the form of planting calendars and sowing guides. This information is distributed by radio and television and also directly as bulletins sent to the trained farmers, translated into five local languages. In another case, external partners supported the creation of management conventions to agree designated routes for livestock movements in agricultural areas. Where the conventions have been successful, it has proved important to keep them up-to-date in changing circumstances and to sustain levels of trust; otherwise historical agreements can become redundant.

Given the emerging state of climate adaptation in Mali, it is difficult to highlight examples of good practice that point the way to conflict-sensitive LCCRD, other than emphasising the importance of considering nuanced local circumstances in any intervention area (Djouidi *et al.* 2011). The boxes, which examine failed agricultural expansion and the ongoing Tuareg rebellion, highlight some of the more severe and intractable problems related to climate change and conflict in Mali and offer some broad principles for resolving them.

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Further reading

Benjaminsen, T.A. (2008) 'Does Supply-Induced Scarcity Drive Violent Conflicts in the African Sahel? The Case of the Tuareg Rebellion in Northern Mali', *Journal of Peace Research* 45.6: 819–36

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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.