



DECEMBER 2017

## Mali's Fertile Grounds for Conflict: Climate Change and Resource Stress<sup>1</sup>

Local natural resource conflicts in Mali have spill-over effects, to other sectors, and to other regions. They are not always geographically contained and have the potential to increase the risk of conflict elsewhere. Yet, these conflicts and their impacts are often treated in isolation rather than being understood holistically. This policy brief first analyzes different local and regional resource-use conflicts, and their internal ripple effects in the context of Mali. It then investigates the pressures posed by population growth and climate change on resource-use and how these impact agricultural productivity and food security. Finally, the brief concludes with policy recommendations, arguing the case for conflict prevention and conflict-sensitive approaches to be integrated into all natural resource initiatives. This will help in better management of trade-offs, particularly around prioritizing certain natural-resource dependent livelihoods over others, or investing in certain regions over others.

### Interlinked risks require integrated responses

The exploitation of natural resources – notably land and water – is the backbone for Mali's economic development, supporting the livelihoods of almost 80 per cent of the population. Conflicting interests over the management and governance of natural resources have however, affected the use of these resources.

Mali faces a multitude of interconnected resource conflicts that affect the country as a whole. Yet, these conflicts and their

impacts are often treated in isolation rather than being understood holistically. Development initiatives often take insufficient account of the links between natural resource conflicts, population growth and climate pressures.

Interlinked risks demand integrated responses. In designing integrated responses, particularly in politically fragile contexts, this policy brief therefore argues the need to:

1. Develop an evidence base on the various local and regional natural resource conflict dynamics across different regions in Mali, particularly identifying how they impact each other;
2. Understand how the pressures posed by population growth and climate change affect resource use conflicts and impact on other important factors such as agriculture and food security;

<sup>1</sup> This policy brief benefitted enormously from thoughtful comments provided by Hartmut Behrend, Jessica Hartog, Felix Hoogveld, Louise van Schaik, Phil Vernon and Louisa Waugh.

3. Ensure that interventions that affect resource use, particularly in agriculture, are designed and implemented so they take account of existing and potential conflicts, and of potential climate change impacts.

## Local and regional natural resource conflicts

### Northern Mali

#### **Mali came under international focus in 2012, when an armed Tuareg rebellion initiated a separatist movement – the National Movement for the Liberation of Azawad (MNLA) – in the north.**

The causes of this conflict have been widely documented.<sup>2</sup> A military-junta led coup d'état against the government followed in light of its inadequate response to the rebellion. Political and revolutionary changes in Libya and Côte d'Ivoire led to a proliferation of heavy weapons from Libya into Mali, and a return of Malians, who had been living and working in Libya and Côte d'Ivoire back home, intensifying separatist sentiments.

The rise of Islamist extremist groups in the north such as Ansar Dine, the Movement for Unity and Jihad in West Africa (MUJAO) and Al-Qaeda in the Islamic Maghreb (AQIM) caused further instability. The conflict escalated to such a scale that the Mali government and ECOWAS requested foreign military intervention. A French military operation – Operation Serval – was launched to halt the southwards advancement of Islamist insurgents from the north. The crisis in northern Mali unfolded in the midst of a severe drought that had damaging effects on people's livelihoods, and highlighted the political and economic marginalisation felt in the north.

---

2 See for example: Chauzal, G. and Van Damme, T., 2015. 'The roots of Mali's conflict Moving beyond the 2012 crisis.' *The Hague: The Clingendael Institute*.

### Central Mali

#### **While attention has focused on northern Mali, insecurity and armed violence is escalating in central Mali, an area more densely populated than the north, and also largely neglected by the state.<sup>3</sup>**

The Mopti region in central Mali encompassing the Inner Niger Delta is a fertile and resource-rich area. Three main types of resource users inhabit the region – Fulani (or Peul in French) pastoralists, Dogon and Bambara farmers and Bozo and Somono fishers, whose livelihood production systems co-exist and, at times, overlap, depending on the season. Conflicts among different resource user groups have in the past mainly been managed by customs and by local chiefs. Peaceful coexistence among these communities however, is threatened with intensifying levels of conflict between them.

There are several key drivers of conflicts and instability in the region. Some of these include incompatible customary and statutory land tenure and resource-use systems, difficulties in delineating agro-pastoral areas, increased competition over resources, particularly in the context of a changing climate, and weaknesses in implementation of the 2001 Pastoral Charter – legislation regulating access to pastoral resources.

Decentralisation is another factor, and has been both critical and controversial for Mali.<sup>4</sup> The Mali government initiated public policies of devolution to control and manage natural resources. In some cases, it has caused conflict, with decentralized national policies clashing with customary law.<sup>5</sup> Decentralisation has been particularly problematic in central Mali, where local authorities have abandoned posts predominantly in rural areas due to

---

3 International Crisis Group. 2016. 'Central Mali: An Uprising in the Making?' Africa Report N°238, Brussels: International Crisis Group.

4 Davis, L. 2014. 'Supporting peaceful social, political, cultural and economic change in Mali'. *London: International Alert*.

5 Lalumia, C. and Alinon, K. 2010. 'Mali Land Tenure Assessment Report'. *Washington D.C.: USAID*.

insecurity. This vacuum has been filled by armed groups, including those associated with violent extremism. Violent incidents in the region however, are not restricted to so-called ‘jihadists’; they also arise from armed banditry and scores being settled between local people and security officials, in the context of little access to official forms of justice.

The expansion of the northern conflict has additionally contributed to violence in the central region. Some Fulani pastoralists marginalised by agriculture-centred policies joined the jihadist movement MUJAO that emerged during the conflict in the north. With access to training and weapons, they have engaged in violent clashes against, amongst others, Tuareg pastoralists from the north over exploitation of natural resources, particularly access to pasture and seasonal watering points, and livestock theft.

### Southern Mali

**There is limited documented evidence on natural resource stresses and conflict dynamics in the Sikasso region in southern Mali, the country’s bread basket and most populous area.**

This is partly because the south has remained stable (thus far). However, given the fragility of governance in Mali, this region cannot be considered to be immune from the impacts of conflicts in north and central Mali, as well as from the pressures of natural resource stress, environmental degradation and climate change impacts.

Historically, pastoralists from the northern regions of Mali headed to southern Mali via Sikasso and into Côte d’Ivoire during the dry seasons, in search of pasture and/or to trade livestock. Once the rains arrived, pastoralists temporarily settled in the south, would head back north to avoid the Inner Niger Delta flood zone in central Mali, keeping away from agricultural land, to reach fresh pasture again.

The expansion of agriculture in central and south Mali, coupled with climate impacts has however, affected the traditional migration routes of pastoralists. Anecdotal evidence suggests that poverty, insecurity, natural

resource stresses and climate impacts are driving larger numbers of pastoralists, with their livestock southward.<sup>6</sup>

This increases pressure on natural resources, leading to deforestation, the clearing of land for agriculture, overuse of soil and fertilizers, plus loss of biodiversity.<sup>7</sup> It has intensified the risks of conflict between farmers and herders owing to an increased proximity of livestock to farmers’ fields and the heightened risk of crop damage. With Sikasso considered the bread basket for Mali and yet one of the poorest regions, understanding the various pressures on natural resource use is imperative for agricultural productivity and food insecurity.

### Twin pressures of population growth and climate change

**Resolving natural resource conflicts in Mali necessitates understanding and dealing with the twin effects of population growth and climate change.**

Mali is currently experiencing rapid levels of population growth. Projections by the Population Reference Bureau estimate that the population, currently 18.9 million, will rise to approximately 45 million by 2050.<sup>8</sup> The impacts of this population growth will be most keenly felt in the fertile and resource-rich areas of Sikasso, in southern Mali, already the most populous region. A growing population requires efficient yet equitable utilization and management of natural resources to meet livelihood and food security needs.

6 International Alert, *Conflits et ressources naturelles dans un climat en changement: Élaborer des réponses intégrées et efficaces au Mali*, 2017. Bamako, October.

7 IFAD, *Fostering agricultural productivity Project – Financing from the adaptation for smallholder agriculture Programme (PaPaM/asaP)*, 2014, <https://www.ifad.org/documents/10180/bff22a3a-e88f-4293-a05d-8fff17356964> (accessed 20 November, 2017).

8 Population Reference Bureau. *2017 World Population Data Sheet*, 2017. Washington D.C.: PRB.

There is a high level of uncertainty associated with climate projections for Mali, with little agreement between climate models on future patterns of precipitation.<sup>9</sup> Notwithstanding, it is widely agreed that climate change is likely to increase inter-annual variability, with the rainy season becoming more unpredictable. It is also likely that there will be increased intra-seasonal variability, for example, an increase in the number of dry spells during the rainy season.<sup>10</sup>

Temperature increases are likely to be greater in the northern half of Mali than in the South.<sup>11</sup> Intertwined climate and security challenges have already affected north Mali. Conditions of severe drought in 2012, in the context of poverty, political exclusion, lack of access to basic services and infrastructure facilitated the recruitment of fighters by both separatist and Islamist armed groups.<sup>12</sup> With livelihoods threatened by drought, and in the absence of economic alternatives, some young northerners joined armed groups such as Ansar Dine or the MNLA.<sup>13</sup>

Seasonal migration, long been an important livelihood coping strategy, is intensifying due to the impact of climate change on water availability and grazing lands in northern and central Mali.<sup>14</sup> This is leading to a steady relocation of livelihoods, particularly fisheries and herding, to move southwards, where rainfall and population density is higher and agricultural productivity greater.

## Impacts on agriculture and food security

**Conflicts over resource use and the impact of climatic change are amongst the key challenges the agricultural sector faces alongside low productivity and low-added value, post-harvest crop losses, under-developed infrastructure and markets.**

Where agriculture is concentrated in central and southern Mali, natural resource-based conflicts and climate pressures, both directly and indirectly, further reduce productivity.

Resource-use conflicts between farmers, pastoralists and agro-pastoralists occur in cases of changing land-use practices and changing regimes of access to water resources. Since the modernisation of agriculture in the 1950s, successive policies (seen by some as 'anti-nomad' in practice), have increased pastoralists' marginalisation by reducing their access to land and water. Land tenure reforms, development policies and political reforms in Mali have led to mutual resentment between different groups and contributed to land based conflicts.<sup>15</sup>

Apart from irrigated rice, agricultural production in Mali is mainly rain-fed, and therefore highly sensitive to climate change.<sup>16</sup> Even when considering the uncertainty of the climate forecasting models, climate change seems certain to impact significantly on this sector, through changes in crop yields, water availability, pests and diseases, animal health and other biophysical factors.<sup>17</sup> Changes in crop yields will subsequently have cascading impacts on production revenues and overall food security.

---

9 Christensen et al. 2007. 'Regional Climate Projections.' *IPCC WG II Chapter 11*.

10 Ebi, K., and Smith, J. 2006. 'Mali Pilot Study: Climate Change and Agriculture in Ziguinchor.' *Washington DC: USAID*.

11 Christensen et al., *op. cit*; Lalumia, C. et al, *op. cit*.

12 adelphi, *Climate change, fragility and conflict in northern Mali*, 2016, ECC Platform Library <https://library.ecc-platform.org/conflicts/climatic-change-fragility-and-conflict-northern-mali> (accessed 20 November, 2017)

13 Ibid 12.

14 International Alert, *Conflicts et ressources naturelles dans un climat en changement: Élaborer des réponses intégrées et efficaces au Mali*, 2017. Bamako.

---

15 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.

16 Government of Mali, *Programme d'Action National d'Adaptation aux Changements Climatiques*, 2007. Direction Nationale de la Météorologie, Global Environment Facility and UN Development Programme.

17 Pedercini et al. 2012, 'Potential Impacts of Climate Change on Food Security in Mali'. *Rome: FAO*.

Analysis from earlier this year suggests that more than 3.8 million people were affected by food insecurity during the lean season (June–August).<sup>18</sup> This is an increase from 3 million at the same time last year. The increase is partly due to the 2016 floods that affected Gao, Mopti, Ségou and Sikasso regions more severely, causing damages to crops, and to insecurity, which has reduced access to cultivated and pastoral areas. While this may not be directly attributed to climate change, it provides a good example, along with the earlier droughts, of how climatic change might impact people's livelihoods and food security.

### Integrated Responses to managing resource-based conflicts

As the Mali government, international donors, private sector and civil society seek to identify responses to optimize natural resource use, reduce conflict, adapt to climate change and ensure food security in Mali, several options could be considered, for example:

**First, broaden the understanding of how local natural resource conflicts have ripple effects on wider conflict dynamics. Conflict breeds other conflicts.** The impacts of local and regional resource conflicts in Mali are not geographically contained, and – taken together – affect the country as a whole. Addressing these conflicts therefore requires understanding their local underlying causes, how these are linked to wider factors, and how the impacts of conflicts in one place spill over elsewhere. This understanding is an important first step in enabling more integrated responses.

**Second, invest in conflict prevention.** Disputes over natural resources are almost ubiquitous in a country whose economy is so dependent on them. When resolved

peacefully they enable progress, whereas when unmanaged, particularly in the context of Mali's weak governance, they can trigger further violence. Often, such conflicts are left unaddressed until they turn violent. Not enough attention is paid to places where natural resource stresses are latent – and where pressure seems to be increasing. In Mali, as resource conflicts are interlinked and have wider impacts on development and security, investing in conflict prevention is vital, and makes economic sense.

**Third, take account of how pressures of population growth and climate change affect natural resource use in the design and implementation of development projects.** This will make such initiatives more successful on their own terms and help reduce the risk of violence, whereas a failure to do so will likely result in ineffective and unsustainable results, and enhance the risk of conflicts. Population pressures will likely be greatest in southern Mali, whereas climate impacts are more serious in north and central Mali. However, through impacts on resources, livelihoods, migration patterns and food security, actions to adapt will need to be taken across all sectors and regions, and at all levels.

**Fourth, integrate conflict- and climate-sensitivity into initiatives aimed at enhancing food security.** Technical solutions to enhance agricultural productivity and food security in Mali are much needed; they are also argued to be possible through a mix of agronomic measures, rain-fed agriculture, livestock cultivation and aquaculture<sup>19</sup>. However, these investments in the absence of context-sensitive conflict and political-economy analysis, risk doing more harm than good, and may create new or exacerbate existing grievances and conflicts.

Any measures to enhance agricultural and food productivity will necessitate relying on the fragile resources of land and water that different livelihoods depend upon. This will

18 OCHA, *Humanitarian Bulletin Mali*, February–March 2017 [https://reliefweb.int/sites/reliefweb.int/files/resources/BulletinHumanitaire\\_Mali\\_20170331\\_EN.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/BulletinHumanitaire_Mali_20170331_EN.pdf) (accessed 21 November, 2017).

19 Bindraban, P. and Groot, R. 2017, 'Food Security and Employment under a Changing Climate in Mali: What are the options?'. *Utrecht: NCEA*.

likely result in trade-offs, particularly around prioritizing certain livelihoods over others or investing in certain regions over others. These trade-offs need to be well-understood and carefully managed.

For example, it is important to balance the emphasis on increasing agricultural output, with the needs of pastoralist populations and the contributions they could make to improve food security. This will prevent further marginalising pastoralists and managing the risks of conflict between farmers and pastoral communities. Given Mali's climatic conditions, the role that migratory pastoralism and nomadic systems can play as an effective livelihood strategy, in conjunction with the much needed agricultural intensification, should be further explored.

## About the Planetary Security Initiative

The Planetary Security Initiative aims to help increase awareness, to deepen knowledge, and to develop and promote policies and good practice guidance to help governments, the private sector and international institutions better secure peace and cooperation in times of climate change and global environmental challenges. The Initiative was launched by the Netherlands Ministry of Foreign Affairs in 2015 and is currently operated by a consortium of leading think tanks headed by the Clingendael Institute.

### Follow us on social media

 @PlanSecu

 The Planetary Security Initiative

 The Planetary Security Initiative

E-mail: [psi@clingendael.org](mailto:psi@clingendael.org)

Website: [www.planetarysecurityinitiative.org](http://www.planetarysecurityinitiative.org)

## About the author

**Shreya Mitra** is an Adviser on Natural Resource Management and Climate Change at International Alert. Shreya's specialism focuses on understanding the links between climate change, conflict and security. Her work to date has centred around conducting field research on community level resilience to conflict and climate change, and providing technical advice on integrating conflict-sensitivity into policies and development and adaptation projects. She is a contributing author to the 2015 report, [A new climate for peace: Taking action on climate and fragility risks](#), commissioned by the G7 foreign ministries.