



Policy brief

# Rapid assessment of the hunger-climate-conflict nexus

## Food and nutrition security in Mali

Mary Allen Bello, Leigh Mayhew and Sarah Opitz-Stapleton

### Key messages

Fragility and conflict create vulnerabilities to climate and non-climate shocks, and impact livelihoods and food and nutrition security. Decades of fragility and conflict have led to low investment in socioeconomic development.

In Mali, repeated severe flooding has damaged rice crops. Armed groups threaten communities with kidnap and rape, making it difficult to work in fields and to travel for non-farm jobs.

Poor rice harvests and sharp price rises have led to households cutting back on number of meals, and diversity of food. Adults reduce food consumption so that children can eat.

Women face the highest livelihood, food and nutrition insecurity, as well as gender-based violence.

# Acknowledgments

---

The authors would like to thank Emma Beelen, Kira Fisher, Lisa Jörke and colleagues at Action Against Hunger for their insights and inputs and their logistical support for the research. We'd specifically like to thank staff at Action Against Hunger Offices in Mali, Somalia and South Sudan for their insights and inputs during research design and review, as well as their support and facilitation of the primary data collection. We'd like to thank Alpha Youssouf Wangara for his support in coordinating and carrying out primary data collection in Mali. At ODI, we are grateful to Simon Levine for his vital inputs during peer review. We are also grateful to Jennypher Calderon for project management support. Editing and typesetting by vtype.co.uk

## **About the authors**

ORCID numbers are given where available. Please click on the ID icon next to an author's name in order to access their ORCID listing.

### **Mary Allen Bello**

Mary Allen Bello is a Senior Expert on resilience and livelihoods in West Africa for Practical Action. She has more than 30 years of experience working at the intersection of research and as a practitioner in humanitarian and development programming across West Africa, with a particular focus on Mali. She was previously the Mali Country Programme Director for SOS Sahel International and the West Africa Coordinator for Practical Action.

### **Leigh Mayhew**

Leigh Mayhew is a Research Officer within ODI's Global Risks and Resilience Programme, and a fellow at The Centre on Armed Groups and Civil War Paths. His research focuses on armed groups; illicit economies and development; smuggling networks and the intersection with armed conflict; radicalisation; and the security dimensions of climate change.

### **Sarah Opitz-Stapleton**

Sarah Opitz-Stapleton is a Research Associate with the Global Risks and Resilience Programme at ODI. She has more than 19 years of experience providing research and advisory analysis in support of disaster risk management and climate resilience for government, humanitarian and disaster development agencies in projects in Africa, Asia and Latin America. Sarah also works at the intersection of climate, security and development in fragile and conflict affected settings (FCAS), with a focus on the Horn of Africa and the Sahel. ORCID ID: 0000-0002-4710-6692



Implemented by



Readers are encouraged to reproduce material for their own publications, as long as they are not being sold commercially. ODI requests due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the ODI website. The views presented in this paper are those of the author(s) and do not necessarily represent the views of ODI or our partners.

This work is licensed under CC BY-NC-ND 4.0.

How to cite: Optiz-Stapleton, S. et al. (2023) Rapid assessments of the hunger–climate–conflict nexus: Food and nutrition security in Mali. Policy brief. London: ODI (<https://odi.org/en/publications/rapid-assessments-of-the-hunger-climate-conflict-nexus>)

---

# Introduction: fragility, conflict and vulnerability to climate shocks

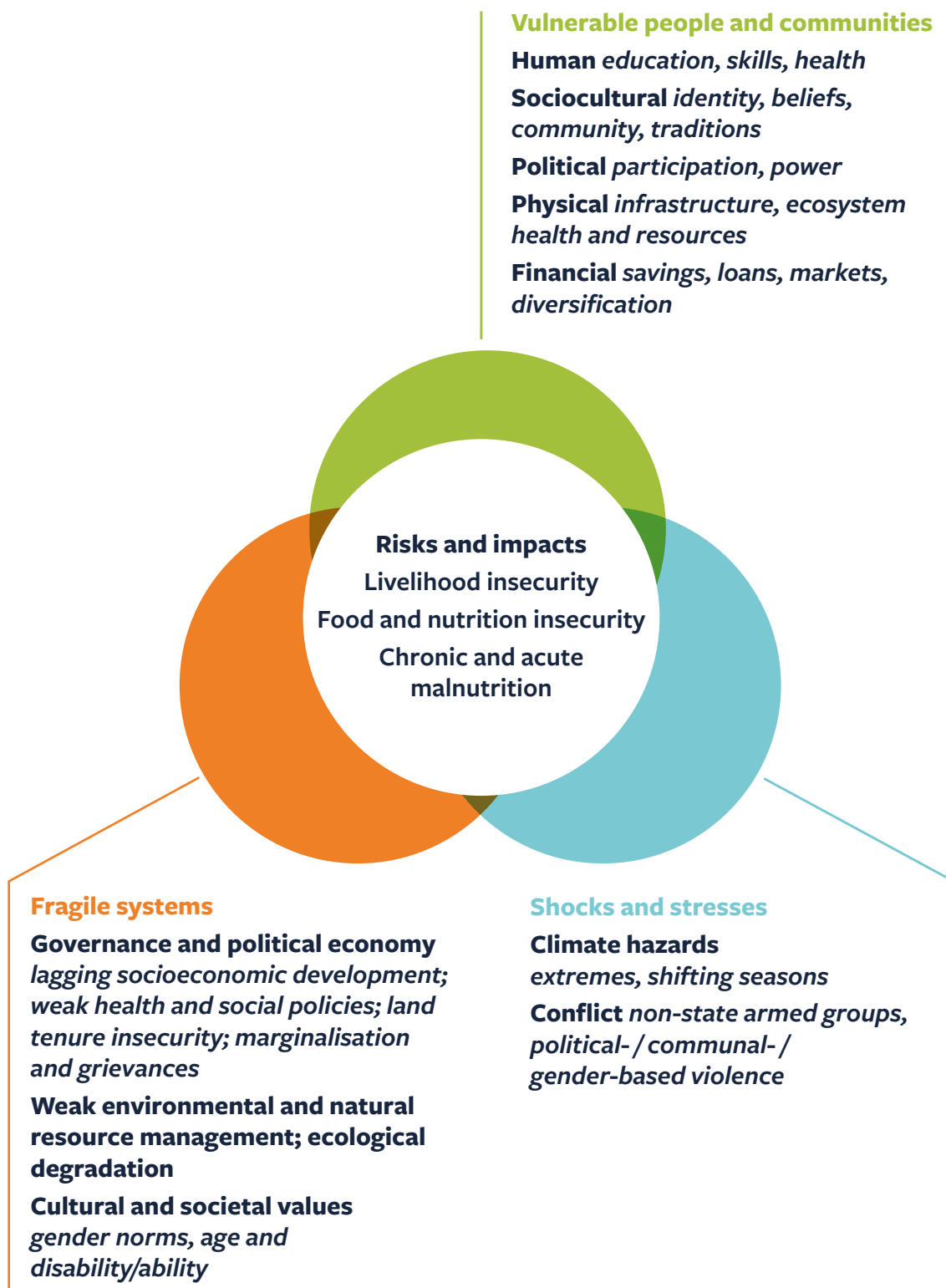
There is nothing ‘natural’ about disasters. When a climate hazard, such as a drought or a flood, triggers impacts that are disastrous to people, their livelihoods, and their food and nutrition security, it is because the systems upon which people depend are fragile. Elements of fragility – such as socio-political marginalisation, lack of economic development or land tenure insecurity – can create the systemic conditions that contribute to conflicts at local to national levels. And conflict, particularly violent conflict, further erodes people’s livelihoods and food security, destabilises markets and increases vulnerability to climate shocks (even if these hazards are not yet influenced by climate change). Even when conflicts are not currently occurring, the impacts of their legacy on socioeconomic development can continue to perpetuate fragility. Fragility, with or without conflicts, creates vulnerabilities and exposures to climate shocks and non-climate stressors at individual, household and community levels, such that when a hazard like drought occurs, its impacts can become disasters

## Climate shocks layered on fragility and conflict in Mali

Conflict in Mali has its roots in long-standing grievances and demands for autonomy in northern Mali. There has been a significant uptick in violent conflict since 2012 between jihadist groups and the Malian Armed Forces supported by the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA). The violence has also been compounded by political instability, with two coup d’états since 2020. 2022 was the deadliest year ever for Malian civilians, with a total of 2,155 civilian fatalities recorded (ACLED, 2023). Civilians are at risk of robbery and kidnap, especially when travelling on the roads. Around 40 separate events of violence against civilians were reported in the Timbuktu region, where we conducted interviews and focus groups, in the 12 months to April 2023.

Malian livelihoods largely comprise rainfed agriculture (in the south) and irrigated agriculture (in the middle), with nomadic pastoralism in the arid north. Mali’s climates are naturally variable, ranging from semi-arid and arid grasslands from the south to the middle, to desert in the north. Rainfall, mostly during the West African Monsoon from June to October, is naturally highly variable within the monsoon season and from year to year, going through multidecadal cycles of drier and wetter conditions. Since the 1980s, rain totals have increased, although the monsoon is starting later and more of the rain is falling in intense events that contribute to flooding (Holmes et al., 2022). Heavy rainfall and large-scale flooding along the Niger River have negatively impacted

**Figure 1** Fragile systems create vulnerabilities for people and communities, such that when shocks and stresses occur, they can have disastrous impacts on livelihoods, access to food and nutrition.



Source: The authors.

the Timbuktu region five monsoons out of seven since 2016 (ReliefWeb 2023); flood waters were only slowly receding as of December 2022 (IFRC, 2023). Climate change will increase the risk of both flood and drought (Holmes et al., 2022). The context of complex and layered conflict laid out above creates and perpetuates livelihood vulnerabilities to these and other climate shocks and non-climate stressors; the impacts of climate hazards alone on food and nutrition security might not be as severe if socioeconomic fragility and vulnerabilities had not already been so acute.

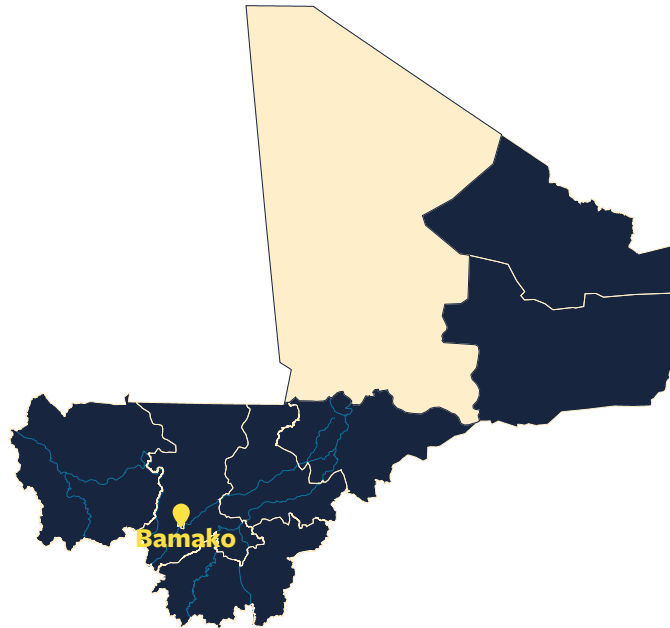
## Study focus

Action Against Hunger is implementing a regional project funded by the German Federal Foreign Office (GFFO): Multisectoral humanitarian response to the deteriorating nutrition situation focusing on severely affected crisis contexts in sub-Saharan Africa. The project aims to improve the nutritional status of crisis-affected populations in seven countries, including South Sudan, Mali and Somalia. It also aims to generate evidence to better shape and scale up approaches that aim to tackle the impacts of layered crises, including those influenced by climate change and the cascading socioeconomic consequences of COVID-19.

As part of this regional project, Action Against Hunger has commissioned two assessments to inform and bolster its humanitarian and resilience programming and interventions. The first assessment aimed to understand, from the perspectives of those experiencing fragility, conflict and climate shock layering, how these complex crises are impacting food security and what coping mechanisms households and communities are employing. This brief presents a snapshot of the findings of the main report 'Rapid assessments of the hunger-climate-conflict nexus: first assessment' (Opitz-Stapleton et al., 2023).

Through 45 interviews and 18 focus groups, we examined the layered impacts of fragility, conflict and climate shocks and stresses on food and nutrition security in three communities in Timbuktu Cercle (Tomobuctou Region): Arnassaye, Hondo Bon Ababer and Tintelout. Arnassaye and Hondo Bon Ababer are agricultural communities, and Tintelout is agropastoral. We also asked how people were coping with impacts and what assistance they would like. The perspectives of women and men were sought (separately), as well as those from people living with disability or illness, or caring for a disabled or ill person.

**Figure 2** Tombouctou region, where the three study communities are located.



Note: The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the authors, Action Against Hunger, ODI or the GFFO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Source: United Nations Maps & Geospatial services

## Layered crises and impacts on livelihoods and food security

Men and women are fearful to travel outside their own village due to the risk of kidnap and robbery by groups of armed men, typically referred to simply as ‘bandits’. Farmers have abandoned distant fields; traders go to fewer markets or have stopped trading all together; herders keep their flocks closer to the village; women and girls are afraid to go to the vegetable gardens, to wash clothes at the river, to collect firewood in the bush and to harvest grass to weave mats. In the villages, the armed men demand ‘zakat’ (a share of the harvest) and use the threat of raids and kidnap to maintain control. Some people are afraid to visit community health centres, which in any case are closed after dark.

Conflict and climate hazard impacts affect livelihoods and wellbeing. As fear has reduced the potential of men and women to produce and earn a living, so prices for fuel and fertiliser have increased at least in part due to the conflict, making it harder to restart production each year.

In the uncertain climate, yields are low and flood damage means some farmers harvest nothing at all. Farm and off-farm employment opportunities are reduced, and young men who travel to find work elsewhere face the risk of being robbed on the way back.

The gendered impacts of poor harvests further reduce women's ability to contribute to household financial stability and food security. Poor rice harvests mean fewer opportunities for women and girls to work as day labourers earning rice for themselves or their households. Women can no longer use surplus rice from the household store to barter for meat, fish and condiments and meet other small household needs without needing to ask their husbands. As they are responsible for ensuring the household has something to eat every day, women are particularly concerned by the sharp rise in the price of rice and the prospect that it will rise even more during the hungry season.

From our data collection, across all three sites, participants stated that they are eating less food and the meals they are consuming are of poorer quality. Few were able to eat meat or vegetables as part of their diets. Similarly to South Sudan and Somalia, adults in households within Mali will often reduce the amounts they are consuming in order to ensure that children have enough to eat. Using the Action Against Hunger household wealth categorisation, data collection revealed that 'wealthy' households are also having to make changes to their daily consumption patterns. As they move into the hungry season, food security for communities in the Timbuktu region is expected to deteriorate over the next quarter of 2023. Predictions by the OCHA Food Security Cluster in Mali for June–August 2023, the hungry season for farmers, show 259,000 people living under pressure and a further 92,000 at the critical stage of food security (up over 40% on figures for March–May).

## Transitioning to more resilient food security: key learning points and recommendations

**Key learning point 1: Livelihood insecurity, as an outcome of fragility, conflict and losses due to climate and non-climate shocks, is resulting in households having to spend more in purchasing food, despite lacking the financial means to do so.**

Few are receiving cash assistance (some reported having received it as a one-off event), though roughly a third are receiving remittances from family members who have migrated to Senegal or Mauritania for job opportunities. Households are encouraging their children to migrate abroad as an economic resilience strategy. The increased costs of farm inputs and food, coupled with the fear of working in fields and poor yields due to flooding, are contributing to household financial



insecurity for most study participants, including those receiving remittances. This is leading to cascading impacts on food and nutrition security for households. However, those households receiving some cash assistance from Action Against Hunger are reporting spending about 50–60% of their incomes on food, in comparison to those not receiving any assistance, who are spending nearly all their incomes on food.

**Key learning point 2: The reporting of malnutrition is inconsistent across interview sites.**

Only 4 interviewees of 45 across the three sites reported having children formally diagnosed as malnourished. Yet, similarly to the Somalia and South Sudan sites, the lack of diet diversity and self-reported reduction of food intake by adults in order to feed children is likely to indicate protein, vitamin and mineral deficiencies. Those households subsisting primarily on rice are more likely to be malnourished than those able to afford millet and beans, which can provide more complete protein, minerals and vitamins.

**Key learning point 3: Communities are having to make livelihood decisions in the absence of information that could help both their short-term and long-term decision-making.**

Farmers in Mali reported receiving weather information (short-term rainfall forecasts); this may have informed their decisions about rice cultivation, since a late start to the rainy season was said to have delayed planting and, as a result, the rice was too small to resist flood waters when they arrived. They did not mention receiving any information or early warning about the timing or height of floods in a particular year, nor about what the long-term trends might be.

**Key learning point 4: Gender-specific risks are driving vulnerability.**

Women in Mali combine heavy domestic responsibilities with livelihood activities such as vegetable farming, weaving mats and petty trade: generating income that – as several men recognised – is critical even in good times to ensuring there is something to eat each day, and in particular that there is something nutritious in the sauce that goes with the rice. As the ability of women to earn their own income is reduced by poor harvests as well as by the fear of attack outside the village, the quality of the household diet is directly affected.

Access to healthcare, particularly for pregnant women, is reduced when they are afraid to visit the clinic, when the clinic is closed at night, or when they must travel to another town for care.

### **Key learning point 5: Livelihood diversification is a resilience strategy, but not possible for many**

Participants in Mali have multiple ideas for improving resilience, ranging from support for developing and securing agricultural production through raising the protective banks around the rice fields, water pumping, access to fertiliser and seeds and training in more modern agricultural techniques. However, households also indicated a wish to diversify or expand their small businesses, such as livestock rearing, food processing and petty trade. They also desire schools for their children, so that they can take more skilled jobs in regional towns and neighbouring countries and send back remittances.

# References

---

**ACLED – The Armed Conflict Location & Event Data Project** (2023) ACLED Dashboard. Website (<https://acleddata.com/>).

**Holmes, S., Brooks, N., Daoust, G. et al.** (2022) *Climate risk report for the Sahel region*. Met Office, ODI and FCDO.

**IFRC** (2023) *Early protocol activation update: Mali Floods*. ReliefWeb report (<https://reliefweb.int/>).

**Opitz-Stapleton, S., Mayhew, L., Ballo, M., et al.** (2023) *Rapid assessments of the hunger–climate–conflict nexus. First assessment: lived experiences relating to food and nutrition security in Mali, South Sudan and Somalia*. Report. London: ODI

**ReliefWeb** (2023) Search results: ‘Floods Mali’. Website (<https://reliefweb.int/disasters?search=Floods%20Mali>).