

STRUCTURED SUMMARY

LAND USE CHANGE AND FARMER–HERDER CONFLICTS

A spatial analysis of case studies from Sudan and Nigeria

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Motivation

Farmer–herder conflicts (FHCs) in Sudan and Nigeria are among the most persistent and destabilising forms of resource-based violence in sub-Saharan Africa. They are shaped by longstanding political, historical, socioeconomic and environmental processes that have altered the balance between farming and pastoralism. In Sudan, decades of state policies prioritising mechanised agriculture and land privatisation have marginalised pastoralists and eroded customary land tenure. In Nigeria, demographic pressure, expansion of croplands into grazing reserves and weak implementation of the Land Use Act have led to intensified competition between herders and settled farmers.

At the same time, climate change, droughts, conflict-driven displacement and environmental degradation continue to reduce the availability of fertile land and water. These pressures are compounded by governance failures, land grabs and tenure insecurity, all of which heighten the likelihood of disputes turning violent.

Purpose

We aim to inform policy-makers, donors, civil society organisations, and local communities about how to better align land management with peace-building. To this end, we identify practical strategies for reducing farmer–herder conflicts in Sudan and Nigeria by analysing land use dynamics. Specifically, we:

- document spatial and temporal patterns of changes to land use and cover in pastoral and agricultural areas
- identify and analyse conflict hotspots where changes in land use overlap with reported disputes
- explore governance and institutional factors that exacerbate or mitigate conflicts
- assess gendered dimensions of land access and participation in conflict and peace-building
- provide evidence-based recommendations for land use planning, governance reforms and conflict mitigation.

Approach and methods

Two focal sites were selected – Azaza Sogora in Gadarif, Sudan, and Awe Local Government Area in Nasarawa, Nigeria – to allow detailed analysis of conflict hotspots.

Data from Landsat imagery captured in 2010, 2015, 2020 and 2025 were processed to explore transitions in land use and cover. Geocoded surveys and direct observations were carried out to validate satellite classifications and better understand local land use.

Key informant interviews (KIIs) and focus group discussions (FGDs) were held with farmers, pastoralists, women, youth, traditional leaders and government officials to capture perceptions of land use changes, drivers of conflict and governance dynamics. Separate FGDs were held for men and women to ensure gender-sensitive insights.

These mixed methods allowed triangulation between quantitative spatial analysis and qualitative community-based evidence.

Findings

Five multiple, interlinked dynamics were observed:

1. In both areas, cropland expanded at the expense of grazing and undisturbed nature. Agricultural expansion often occurred at the expense of traditional livestock corridors, forest reserves and riparian grazing, intensifying competition over land and water.
2. Landscapes have fragmented into a patchwork of fields, settlements and grazing. Herders increasingly pass through cultivated fields, sparking disputes over crop damage. Informal arrangements, such as sharing fallow land, are breaking down under growing land scarcity.
3. State actions have undermined rights to land. In Sudan, state-led land allocation privileges mechanised farming over pastoralism. In Nigeria, weak enforcement of the Land Use Act and inconsistent local decisions have encouraged opportunistic land grabs. Traditional leaders' authority to mediate disputes is being eroded by formal state actions.
4. Women bear heavier livelihood burdens – collecting firewood, water, farming distant fields and making charcoal – than men; yet women are often excluded from decision-making and formal mediation despite playing crucial informal roles in peace-building and maintaining inter-community networks.
5. In Sudan, the war that began in April 2023 has displaced many people into rural areas of Gadarif. With limited options, internally displaced people have cleared forests for small farms and charcoal making, intensifying resource competition with pastoralists.

Policy implications

Farmer–herder conflicts are deeply rooted in structural inequalities and governance failures, but are also exacerbated by rapid land use changes, displacement and environmental degradation. Reducing tensions requires multi-layered strategies that integrate spatial planning, inclusive governance and gender-sensitive approaches. These include measures to:

- legally delineate livestock corridors, grazing reserves and seasonal water points through participatory mapping
- recognise and protect customary tenure rights alongside statutory systems
- build the capacity of traditional leaders and community institutions to mediate disputes
- establish community-based early warning of conflict to prevent escalation
- ensure women's representation in land governance and peace-building.

By addressing both the immediate triggers of conflict and the structural drivers of land competition, policy-makers and practitioners can strengthen rural resilience, support peaceful coexistence and foster sustainable livelihoods in fragile dryland regions of Sudan, Nigeria and beyond.

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