

# Pastoralism in Practice: Monitoring Livestock Mobility in Contemporary Sudan

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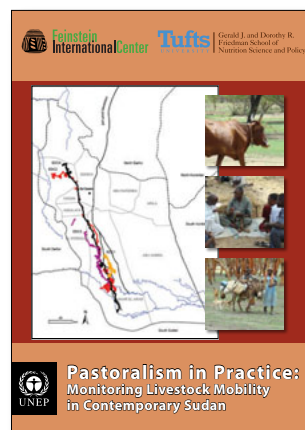


This is the fourth in a series of Policy Briefing Papers which form part of the Environment and Livelihoods component of the UNEP Sudan Integrated Environment Programme, funded by UKAid from the UK Department for International Development (DFID). This paper highlights the strategic importance of pastoralist mobility for livestock production and outlines ways in which pastoralism can be supported to benefit livelihoods, the environment, peace and stability, and the economy of Sudan. It is based on a research report (UNEP 2013, "Pastoralism in Practice: Monitoring Livestock Mobility in Contemporary Sudan"), authored by Helen Young, Hussein Sulieman, Roy Behnke, and Zoe Cormack, with Abdelhafiz Mohamed Adam, Samira Mohammed Ahmed, and Hamid Mohamed Abdelnabi, that can be found on the UNEP and Tufts websites. See: <http://www.unep.org/sudan> or <http://sites.tufts.edu/feinstein/>.

## Pastoralist livestock production in the spotlight

This policy briefing paper presents the main findings of a research study carried out by the Feinstein International Center at Tufts University and partners, which set out to understand the resilience of livestock production systems that depend on strategic livestock mobility. The purpose of this policy briefing paper is to flag key issues, based on the results of recent research, for consideration by government, humanitarian and development practitioners, research institutions, and other actors with a role in policy and decision-making in Sudan. The motivation for the study on which this briefing paper is based was the lack of evidence regarding pastoralism and livestock production in a national context where livestock are increasingly in the spotlight, given their economic importance post-secession. Another motivation was the challenges facing northern pastoralist groups who depend on cross-border migration into South Sudan to sustain their herds during the dry season. A further policy issue is the widely acknowledged problem of herder-farmer conflict over natural resources.

The policy responses to these new economic and political realities have been mixed—while the importance of livestock is well recognised, the national policy imperative is a modernising drive that in some circles goes hand in hand with the settlement of pastoralists (Fahey and Leonard 2007, GoS 2008). Despite some strong sentiments against mobility, mobile livestock production strategies persist in Sudan. The

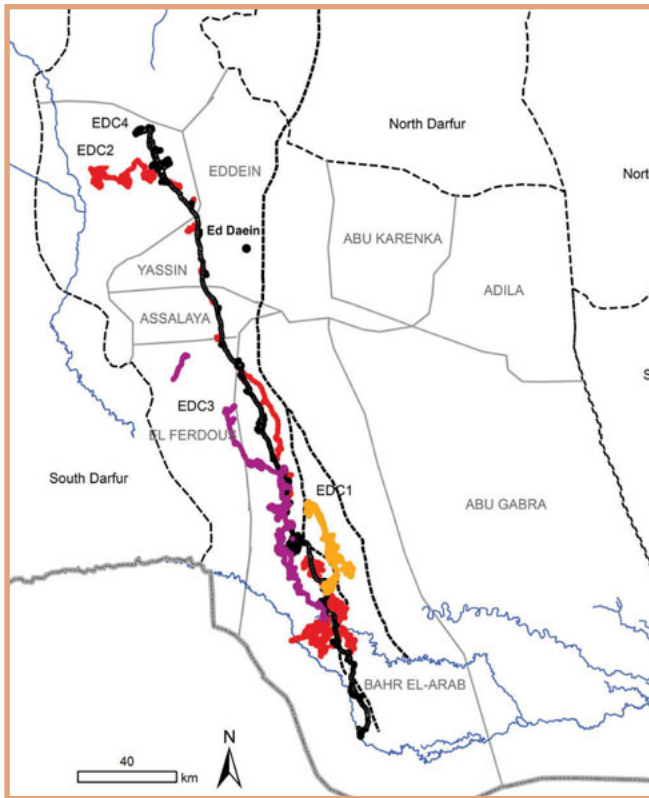


earlier study "Standing Wealth" confirmed the importance of livestock production and the widespread practice of livestock mobility by both "sedentary" and "nomadic" producers (UNEP 2013). In North Kordofan, one of the major livestock-producing states in the country, settled sheep producers are strategically moving their livestock to benefit from the variable distribution of pastures, minerals, and crop residues.

Tufts University and national partners undertook longitudinal monitoring of twelve livestock producers between April and August, 2013; including six *baggara* (pastoralist cattle producers) in East Darfur State, and three *abbala* (pastoralist camel herders) and three *ghanama* (sheep producers) in North Kordofan State. This included weekly telephone interviews, regular outreach visits, livelihood profiles, and the GPS tracking of the herd using an archival store-on-board GPS tagging device. This innovative combination of quantitative and qualitative methods, with geospatial technologies, was piloted during this first phase of the study.

This research policy brief presents the practical and policy implications of the study findings, including strategies for supporting sustainable modernising trends and adaptations,





**Figure 1. Map of East Darfur showing movement of four cattle herders (EDC1 to EDC4)**

while identifying steps to mitigate negative consequences and also constraints to livestock mobility. Thus, the productive potential of the livestock sector will be strengthened and livelihood resilience enhanced.

## Livestock mobility, a common strategy for maximising productivity

Generally cattle herders in East Darfur follow the same migration corridor, although details change from year to year (Figure 1). For example, they change the branches they follow within the main corridor depending on resource availability, security conditions, and number and duration of stops.

However, if a major incident occurs, such as tribal clashes or conflict, they change their migration strategy and may even change the *murhal* (livestock corridor or route) itself. The westwards deviation in Figure 1 is a result of the tribal conflict that erupted in August, as many pastoralists were passing through this area.

Movements north start from the Bahr area in the early rainy season, to capture the new grasses as they appear after the rains. Mixed herds are increasingly the norm, with all the *baggara* in this study owning sheep. The sheep are separated from the cattle on two occasions: when they cross to the

south and when they proceed to the north and pass through densely cultivated areas so as to allow the cattle to move more rapidly in order to reduce conflict.

In North Kordofan, the mobility of sheep herders and high frequency of moving camp during the rainy season (every two weeks) is shown in Figure 2, which contrasts with the hot dry season when they remain close to waterways. ►

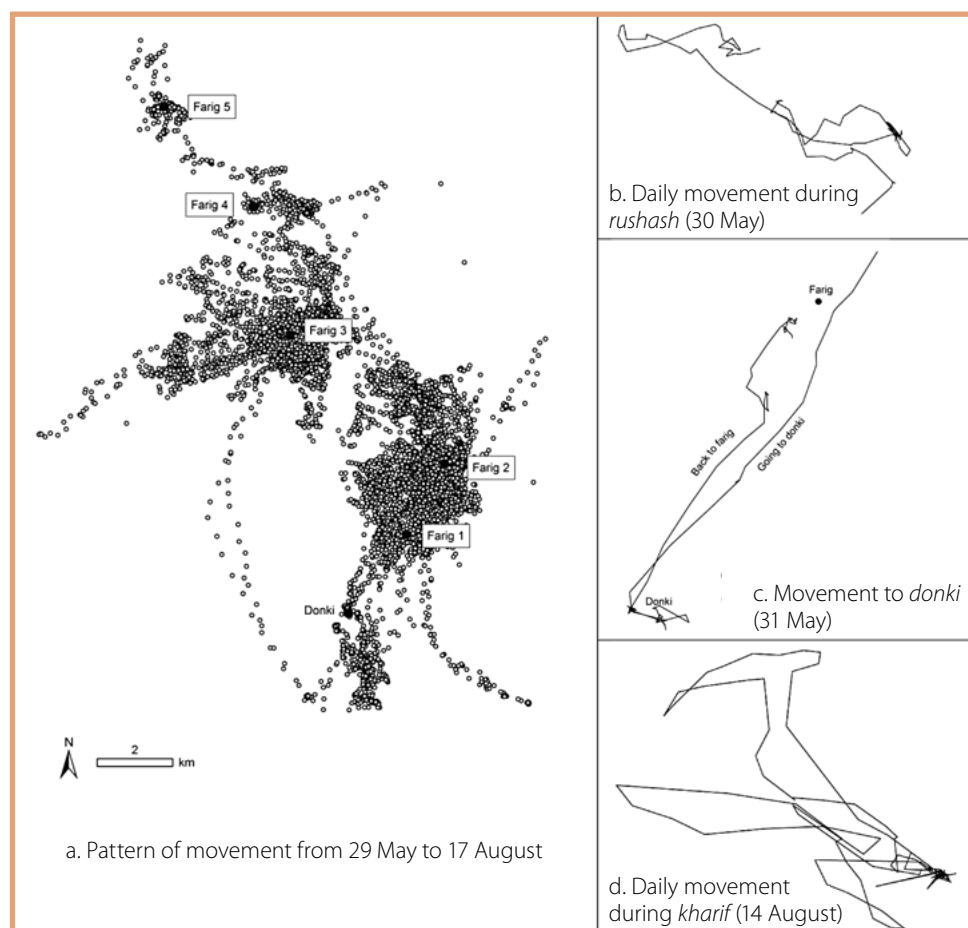
► **The GPS data offer the potential for interpreting animal movement in relation to key resources and conditions, including conflicts, across the rangelands.**

**This approach could play a significant role in guiding future interventions for developing livestock services in both states.**

## Strategic pastoralist mobility promotes environmental and economic sustainability and resilient livelihoods.

Environmental parameters drive pastoralist livestock migrations, including the advancing rainy season and greening up of vegetation. The success of pastoralist livestock production depends on mobility in order to ensure the timely and reliable access to pastures when nutrients peak. The GPS tracking indicated that when this greening is halted or delayed as a result of variable rains, the herder retreats to an area of more nutritious pasture. While the underlying rationale for pastoralist mobility is evident from the study, risks and hazards facing pastoralists are also apparent. In a context of protracted regional conflicts, a contentious new international border, and frequent reports of conflict over natural resources, pastoralists face particular challenges to their livestock mobility. For example, Figure 1 shows how pastoralists had to deviate from their normal course along the central livestock corridor in East Darfur in order to avoid a very serious inter-tribal conflict between the Southern Rizeigat and the Ma'aliyya. These pastoralists adopted conflict avoidance strategies that enabled them to better cope with this situation, including, for example, switching migratory routes, increasing numbers of herders to control livestock in built-up areas, and fostering good local relations and agreements. Other pastoralist adaptations and modernising trends include the use of water tankers or bladders to facilitate access to pastures in dry areas, diversified investment strategies and expansion in sheep production in both States, the development of a new sheep cross-breed in East Darfur, and the privatisation of support services.

Other recent trends are potentially less advantageous to pastoralists; for example, the commodification of crop



**Figure 2.** The spatial and temporal pattern of movement of a sheep herd in North Kordofan (NKS2) for different periods from 29 May to 17 August (*rushash* – onset of the rainy season; *kharif* – wet or rainy season; *donki* – wateryard; *farig* – temporary encampment)

residues, which are now often sold by the farmer. Modernising trends need to be better understood to enable a more informed discussion of the merits and wider implications of adaptations in relation to enabling local livelihoods. ►

► **Re-orienting policies, laws, and institutions to a new understanding of pastoralism requires strategic targeting of institutions, development planners, and decision-makers and supporting them with new evidence and analysis.**

*Pastoralists are changing with the times, and positive trends and adaptations need to be identified and supported, while mitigating potential negative consequences. Maladaptive behaviours should also be identified to enable the identification of alternatives.*

## New evidence of a distinctive pastoralist approach to natural resource governance

A distinctly pastoral approach to local-level resource management is evident from several examples in eastern Darfur, including the institution and governance of summer markets, the coordination of movement along stock routes,

and the regulation of cross-border movements. These descriptions of management institutions in East Darfur document how this pastoral system works and demonstrate positive interactions between local pastoralist systems and local governance. While these are preliminary results, they suggest the operation in East Darfur of a “parametric” approach to resource management, whereby management systems regulate access to natural resources—or the essential conditions that sustain livestock—but do not attempt to regulate the livestock population itself. ►

► **Learn from these positive experiences of “parametric” systems of local natural resource governance—to promote more effective resource management and complementary national policy responses.**

## Perspectives on pastoralism from recent peace agreements

The Darfur Peace Agreement and the Doha Document for Peace in Darfur refer to the importance of respect for the cultural values and traditions of pastoralists, but tend not to recognise the significance of livestock mobility for maximising production and thus an essential component of

the livelihood system. Also, these documents tend to stigmatise pastoralists (albeit unwittingly) by directly linking their situation with security, including the situation of IDPs, returnees, and humanitarian access. Herder-farmer conflict is recognised as a huge problem, yet practical solutions are piecemeal and yet to be fully developed. In general, the policy and project focus within the peace agreements is on rainfed agriculture, while pastoralist development is not mentioned. ►

► **Promote equity in the development of livelihood groups and in decision-making around natural resource use and access**

*Local, national, and international peace processes should be based on an understanding of the rationale for pastoralist mobility and a more participatory approach involving producers.*

## Land, power, political allegiances, and tribal disputes

Historically, land in the Darfur region is structurally linked with power and tribal affiliation: under the *hakura* system, “the allocation of the usufruct right to members of the community (tribe members) is bound to political allegiance to local authorities” (Osman 2013, 29, quoting Meek). For this reason, the escalation of local-level land disputes can be fuelled by the political allegiances of the users of that land and wider tribal politics up to the national level. A local dispute may also be used as a mechanism for mobilising supporters for a wider cause or even conflict. Similarly, tribal rights over a *dar* (tribal homeland) provides an opportunity for consolidation of tribal power within local, state-level, and national institutions. The consequences of such multi-layered

tribal disputes are increasing polarization between neighbouring tribes, which has grave consequences for pastoralist livestock mobility, as illustrated in the case of the Southern Rizeigat-Ma’aliyya conflict in August 2013. ►

► **A deeper understanding of the root causes of tribal and natural resource conflict is needed to strengthen the impact of local and higher-level peace-building initiatives and implications for all land user groups.**

## Innovative approaches to research, collaborative learning, and promoting policy debate can help stimulate a new debate among local and national stakeholders.

An important area of learning arising from the study is the methodological innovations that have generated new evidence with the potential to reshape the policy and programmatic response to pastoralist livestock production and current thinking on land, natural resources, and agriculture. The maps of pastoralist mobility have an immediacy that promotes understanding of key issues, which the written word lacks. ►

► **The strategic dissemination of these findings at every level through local and national partners has the potential for stimulating a new debate among key stakeholders.**

**Pioneering methods and collaborative ways of working need to be supported.**

## References

Fahey, Dan, and David K. Leonard. 2007. The Political Economy of Livestock and Pastoralism in Sudan. *IGAD LPI Working Paper No. 06-08*.

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