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Health, climate change, and humanitarian response in eastern Chad: a multiphase, multi-sited ethnographic study

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Introduction

The climate crisis is a major global health threat, disproportionately affecting the poorest communities. In Dar Sila, eastern Chad, conflict, socio-economic precarity, and climate stress contribute to extremely high mortality. This study examined how local residents and Médecins Sans Frontières (MSF) understand and respond to climate impacts. By integrating communities' knowledge with humanitarian expertise, it aimed to inform operational adaptations in Chad and support future climate responsive humanitarian strategies.

Methods

This study used a multiphase, multi-sited ethnographic design with two components: an organisational ethnography (involving interviews with key stakeholders within MSF and other relevant organisations, observations during meetings and events, and internal document review) and a collaborative case study in MSF's Sila project (incorporating ethnographic observation and informal exchanges, group discussions and interviews with village residents, and review of project documentation). Data were thematically analysed using NVivo. Data collection began in March 2024 and is due to be completed by June 2026.

Ethics

This study was approved by the Comité National de Bioéthique du Tchad (023/MESRS/SE/SG/CNBT/SG/2024), MSF Ethical Review Board (ID 2359), and King's College London Research Ethics Committee (HR/DP-23/24-37836).

Results

The analysis identified three interrelated themes through which water became a central lens: drought, flood, and the well. "Drought" reflected climate change as slow-onset degradation, with shifting rainfall eroding livelihoods, deepening precarity, and producing cumulative health impacts. This mirrored MSF's gradual recognition of climate change as an operational concern, shaped by institutional and political constraints. "Flood" centred on the unprecedented August 2024 floods, when climate change became visible as an acute emergency for both MSF and local residents. It tracked points of alignment and disconnect between humanitarian and communities' responses, raising questions about preparedness, risk, solidarity, and unequal exposure. "The well" captured chronic water scarcity and absent infrastructure, situating climate change impacts within longer histories of marginalisation. It revealed how communities and MSF navigated "impossible choices" over water access, safety, and the allocation of resources, ultimately shaping longer-term local and organisational futures.

Conclusion

This study describes how climate change is reshaping everyday life, health, and humanitarian practice in Dar Sila, challenging MSF to rethink both the boundaries of its medical mandate and the principles underpinning its action. By revealing tensions between global techno-scientific framings and local realities, it underscores the need for approaches grounded in collaboration, local knowledge, and locally defined priorities. In practice, MSF programmes should integrate climate considerations into ongoing analysis of health determinants to inform adaptive programme design, work with communities to develop early warning, preparedness, and response for climate-related shocks, and strengthen water-related interventions to address social and future orientated dimensions. While geographically limited, these findings provide actionable insights for MSF and similar organisations to develop more climate-sensitive programmes in comparable settings.

Conflicts of interest

All authors declare no competing interests.