

# **Community-Based Fire Management in East and Southern Africa's Savanna-Protected Areas**

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## **Abstract**

The introduction of fire suppression policies and expansion of exclusionary protected areas in East and Southern African savannas have engendered a wildfire paradox. Outside protected areas, livestock have replaced fire as the dominant fuel consumer. While inside their boundaries, wildfire intensity has increased due to accumulating flammable biomass. Community-Based Fire Management (CBFiM) is recognised as an alternative bottom-management strategy to address the wildfire paradox and promote equitable fire governance across conservation landscapes. Yet, there has been little investigation into the implementation and effectiveness of CBFiM across East and Southern Africa's savanna-protected areas. We employed a social-ecological systems framework to develop a systematic map of the published literature on the framing and features of CBFiM in this context. We characterise the challenges and opportunities for their design and implementation, focusing on the relationship between governance systems and community participation in fire management. We find that CBFiM projects are commonly governed by the State and international NGOs retaining decision-making power and determining access to savanna resources and fire use. Existing CBFiM projects are limited to communal rangelands and are developed within existing Community-Based Natural Resource Management programmes prioritising fire prevention and suppression. Planned CBFiM projects propose an exclusive early-dry season patch mosaic burning regime to incorporate indigenous fire knowledge into modern scientific management frameworks, but evidence of indigenous and local peoples' involvement is scarce. To provide equitable fire management, CBFiM projects need to address inequalities embedded in protected area governance, persisting anti-fire wisdoms, centralised suppression policies, and account for changing state-society relations in the region.

**Keywords:** community-based fire management, social-ecological systems, protected areas, savanna, colonialism