



Introduction

Community-based fire management (CBFiM) has been recommended as an alternative etiological “bottom-up” fire management framework for addressing increasing fire challenges. Colonial fire suppression policies and the eviction of people from savanna-protected areas (PAs) has engendered a self-reinforcing **wildfire paradox** characterised by extreme fire events that exceed natural variability levels due to fuel accumulation (Pyne, 2020; Tendim et al. 2020). Outside of PAs, livestock have replaced fire as the dominant fuel consumer, **eliminating fire regimes that are essential for savanna health and functioning** (Fig. 1) (Archibald, 2016).

European colonial rule “fundamentally altered the political and administrative ways in which many African states managed peoples and environments.” (Eriksen, 2007) It “has been associated with the implementation of fire suppression policies in many tropical savanna regions, markedly disrupting traditional fire management practices and transforming ecosystems.” (Moura et al. 2019).

Primary Research Question

Does CBFiM provide an alternative and realisable equitable, effective, and sustainable ‘bottom-up’ fire management framework? Or is it an extension of the colonial narrative across East and Southern African savanna-PAs?

Identified Challenge

- Ambiguous and discursive definition of ‘natural’ fire regime
- Recent and persisting colonial history, influence, and activity
- Dual fire challenge across savanna ecosystems
- Systematised dichotomies between the social and ecological
- Western-scientific knowledge (re)production and communication

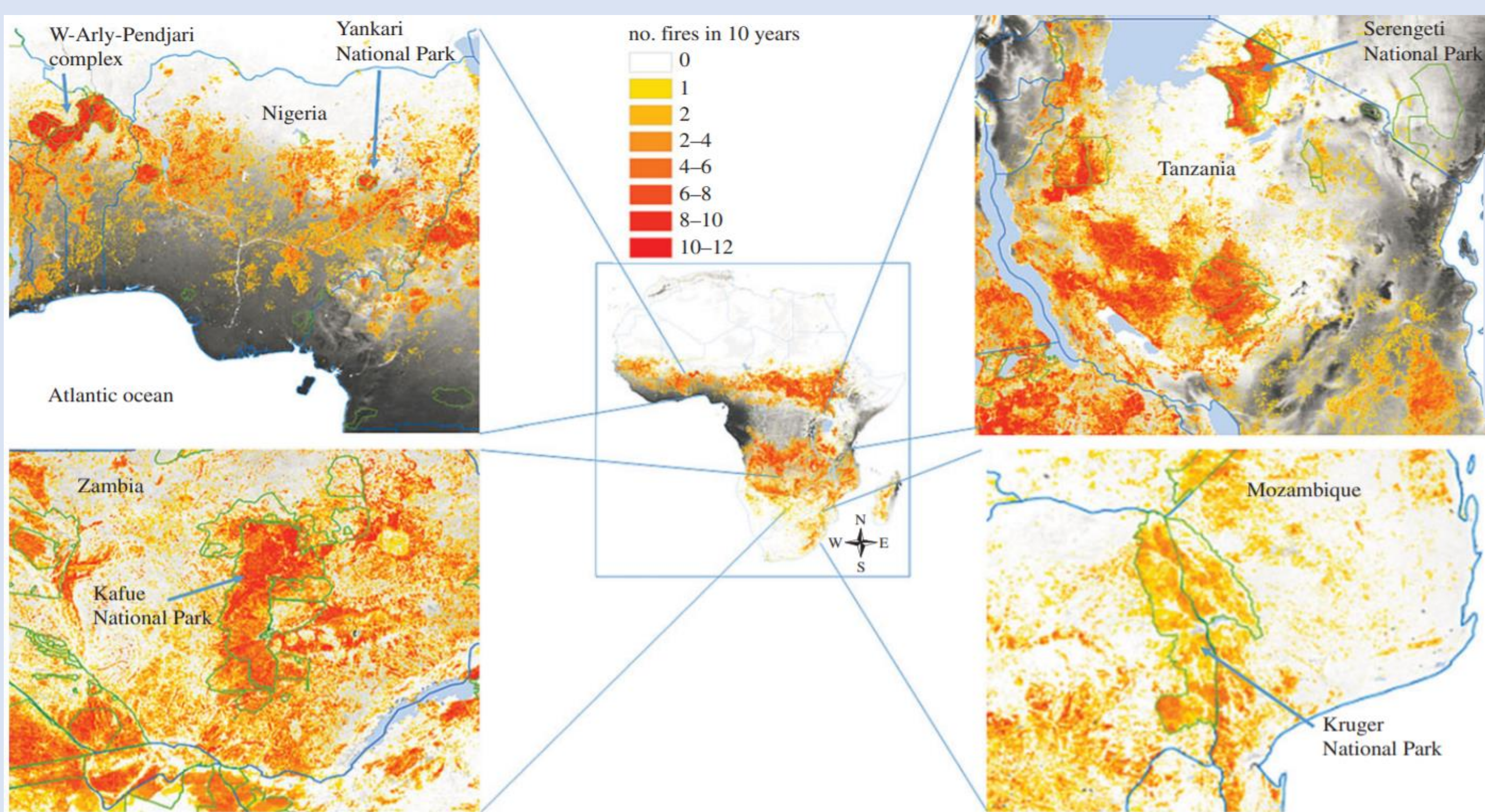


Figure 1. Spatial distribution of fires across Sub-Saharan African savannas reflects a strong negative correlation between population density and fire, where the size of fire exponentially increases where human densities are below 10 people per km². This is most common in PAs where Euro-centric suppression policies have and continue to be enforced (Archibald, 2016).

Framing, nature, and extent of CBFiM:

- Establishment
- Sponsorship and donorship
- Decision-making
- Participation

Two key challenges addressed

The coloniality of knowledge and power: fires as symptoms of local systemic social-ecological and political-economic challenges



Images: Members of the Maasai community in Talek, Southern Kenya, lighting a fire for vegetation regeneration. Abigail Croker (2017)

Methodology

Decolonising Methodologies Social-Ecological Systems Thinking

Mixed Multi-Step Approach



Systematic Mapping Review – Results

Limited evidence base

- Only 20 papers published on occurring, implemented, and proposed CBFiM policies and frameworks
- If occurring within savanna-PAs, this is through default

Implemented CBFiM

- Only implemented on communal lands
- Limited in operationalization and success
- Developed to complement existing CBNRM frameworks
- Developed within IFM initiatives
- Eastern Caprivi IFM programme in Namibia used as model example
- Embedded within Forestry Sciences and Legislation

Proposed CBFiM (for savanna-PAs)

- Focus on integrating or incorporating traditional fire knowledge and practices into modern science management frameworks
- External establishment and governance
- External rule-making organisations and property-rights systems
- External funding and sponsorship
- Savanna burning carbon abatement projects



Figure 2. Challenges confronting the implementation of CBFiM frameworks and policies in savanna-PAs across East and Southern Africa.