

NATURAL RESOURCE PROVISION BY PROTECTED AREAS: A BUFFER TO CRISES

LTZER ZONE ATELIER & HWANGE, ZIMBABWE - LTER-FRANCE

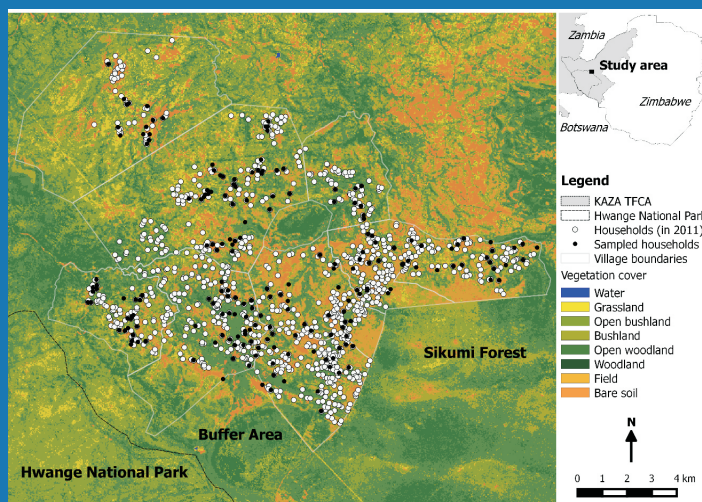


Hwange National Park and its neighboring safari concessions constitute an open conservation landscape surrounded by a diversity of land-use including small scale agriculture, subsistence farming in the rural areas and mining. One key issue in this semi-arid agro-climatic region is to understand the contribution of protected areas to the livelihood and well-being of adjacent communities. This objective fits in well with the growing challenges for conservation and protected areas impacted by humans, which become even more relevant in contexts of climate change and socio-political crises. Only long-term social-ecological research can help us understand the resilience of conservation orientated systems.

RESEARCH

Drawing on mixed methods combining social and ecological tools (interviews of over 200 households, participatory workshops, stakeholders meeting, natural resources use monitoring), we investigated the patterns and sustainability of natural resource use and the provision of ecosystem services in the Hwange system. In particular, we show that protected areas provide a wide range of critical services to provision for nutrition, material and energy. We unraveled how external drivers such as immigration could affect the buffering role of protected areas in times of crises through natural resource depletion and changes in rules, values and knowledge systems. For example, we pointed to the fact that urban exodus and influx of profit-seeking migrants increase pressure at the edges of the protected areas, calling for transformative adaptation in the governance system to ensure that traditional knowledge and rules are legitimated to sustain natural resource pool renewal and ecosystem integrity.

Characteristics of the study area located within the interface between villages, Hwange National Park and Sikumi Forest.



Participatory workshop in villages facilitating consensus over land use by people and wildlife

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AIMS

- To describe the use of natural resources and their trends in the Hwange social-ecological system, with a focus on times of crises.
- To assess the contribution from the protected areas to rural livelihood and the resulting attitudes towards conservation policies and land-uses.
- To identify threats to the sustainability of ecosystem services provision and to facilitate a collaborative management strategy for the Hwange system promoting social, ecological and environmental justice.

OUTCOME - IMPACT

- Documented the interdependencies between conservation and well-being outcomes, across spatial and temporal scales, to stimulate re-thinking of conservation policies.
- Identified threats and elaborated a framework for sustainable provision of ecosystem services.
- Produced an inventory of local ecological knowledge related to drivers of environmental change and indicators meaningful to local communities.
- Incorporated collaborative management into the Hwange National Park Management Plan (2016-2026).

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Services delivered by the area: habitats and biodiversity shelter, grazing areas, fuel and construction material, hunting, research and education.

Hwange LTSER platform facilitates place-based long-term engagement, a prerequisite for building trust and legitimacy, but also focuses on providing the skills and infrastructures to monitor and experiment sustainability transformations.

PRIORITY THEMES



PRIORITY ECOSYSTEM SERVICES



AREA OF RELEVANCE, ACCORDING TO SDG



SDG - UN SUSTAINABLE DEVELOPMENT GOALS

FURTHER INFORMATION

Guerbois C, Dufour A-B, Mtare G & Fritz H (2013) Insights for Integrated Conservation from Attitudes of People toward Protected Areas Near Hwange National Park, Zimbabwe. *Conservation Biology* 27:844-855

Murwira, A., de Garine-Wichatitsky, M., Zengeya, F., Poshiwa, P., Matema, S., Caron, A., Guerbois, C., Hellard, E. & Fritz, H. (2013) Resource gradients and movements across the edge of transfrontier parks. In: *Transfrontier conservation areas: People living on the Edge*. Andersson, J., de Garine-Wichatitsky, M., Cumming, D., Dzingirai, V. and Giller, K. (Eds). pp. 123-136, Routledge, Oxford.

Guerbois C. & Fritz H. (2017) Patterns and perceived sustainability of provisioning ecosystem services on the edge of a protected area in times of crisis. *Ecosystem Services* 28:196-206