

Donor Agency

German Research Association – *Deutsche Forschungsgemeinschaft* (DFG)

Project partners

University of Bonn:

- Institute of Food and Resource Economics
- Institute of Crop Science and Resource Conservation
- Department of Geography

University of Cologne:

- Dept. of Cultural and Social Anthropology

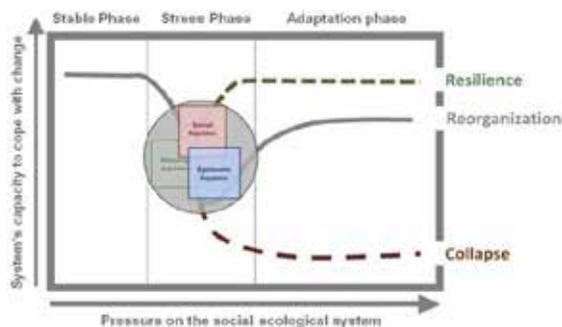
Partners in Africa

- National Museums of Kenya, Nairobi, Kenya
- Kenya Agricultural Research Institute, Naivasha,
- University of the Free State, Bloemfontein, South Africa

Project concept

Interdisciplinary research in partnership contributes

- to understand resilience in African savannah SES
- to contribute to develop and reformulate theories



The RCR Project at a Glance

The project

Integrative African-German Research Consortium structured in 3 multi-disciplinary research clusters, and focusing on social-ecological systems and their regulation in African savannahs.

Project duration

Six years, starting 2010-2016

Donor

German Research Association (DFG)

Lead Institutions in Germany

- University of Bonn
- University Cologne

Lead Institutions in Africa

- National Museums of Kenya (NMK)
- Kenya Agriculture Research Institute (KARI)
- Free State University, Bloemfontein (SA)

Focal areas

- Kenya:
Naivasha, Baringo, Laikipia
- South Africa:
Kuruman, Thaba Nchu

Further information

<http://www.fg1501.uni-koeln.de>

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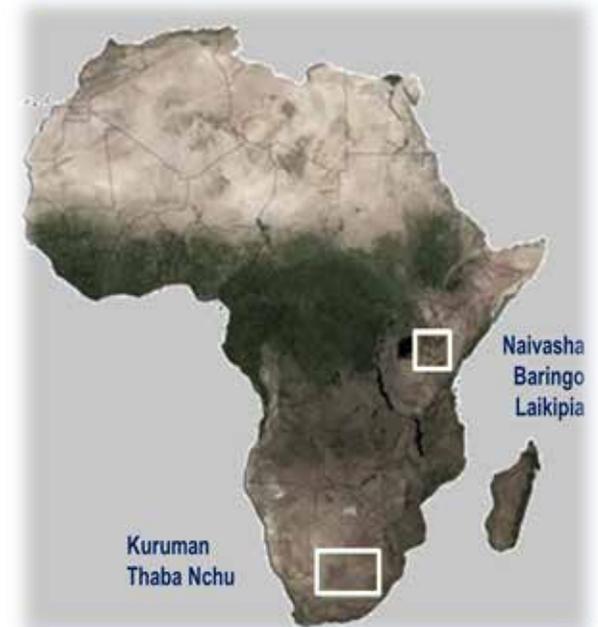
Universität zu Köln



RESILIENCE COLLAPSE & REORGANIZATION



in social-ecological systems of African savannahs



<http://www.fg1501.uni-koeln.de/>



Background

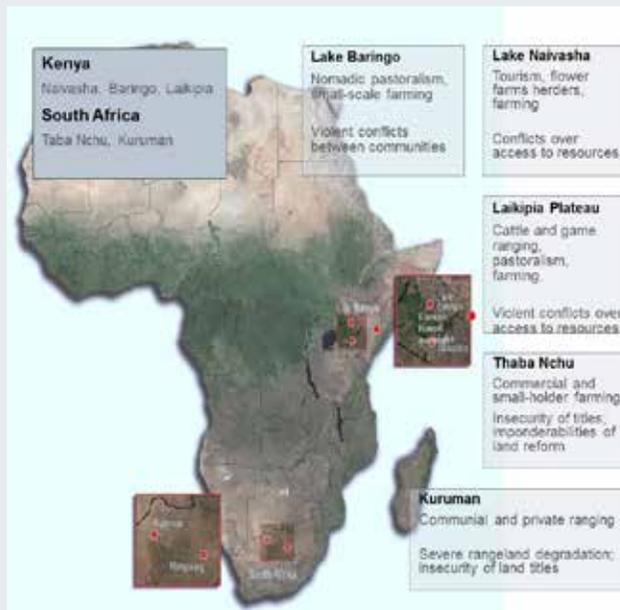
Global change processes, the effects of economic globalization, growing competition for resources, and related rapid changes have heavily impacted human-environment relations, or “coupled SES”. Such **social-ecological systems** are defined as integrated systems of geo-biophysical, social and cultural sub-systems with reciprocal feedback, interdependence and self-organization in which interdependent relationships among humans are mediated through interactions with biophysical and non-human biological units or ecological transformations.

Ecological transformations in savannahs include desertification, resource degradation and loss of biodiversity. Soil degradation and bush encroachment are typically associated with rangelands, while wetlands within arid areas are marked by declining water availability, competition over land, and the invasion of species. The socio-political systems embedded within these environments experience resource exploitation, precarious livelihoods, famine disasters, ethnic upheavals, state failure, and violent conflict.

This project focuses on inter-linkages and differentiates between crises and the resilient buffering of major challenges. It deals with the overlap of and scale mismatch between ecological and social spheres, on dynamics of coupling and decoupling, and on scale transcendent regulation dynamics.

Research Sites

There are a number of similar processes taking place in the complex coupled SES in Kenya and South Africa, while coupling intensity and processes differ between the countries. Comparative case studies focus on Naivasha and Baringo in Kenya and on Kuruman and Thaba Nchu in South Africa.



Objectives / Approaches

We look at the roles of power, agency, and invader species in the coupling (processes, breaks, thresholds).

We consider scale dependencies by studying cross-scale coupling in the comparison of SES dynamics (modelling, cultural comparisons).

Finally, by providing empirical data, the project contributes to theory development.

Project Clusters

The project is structured into three clusters, representing the bio-physical, the social and the cultural sub-systems:

Cluster A:

“Ecosystem Dynamics in Coupled systems”

- *Resilience of Rangeland Soils*
- *Functions and Uses of Wetlands*
- *Vulnerability of Range Vegetation*

Cluster B:

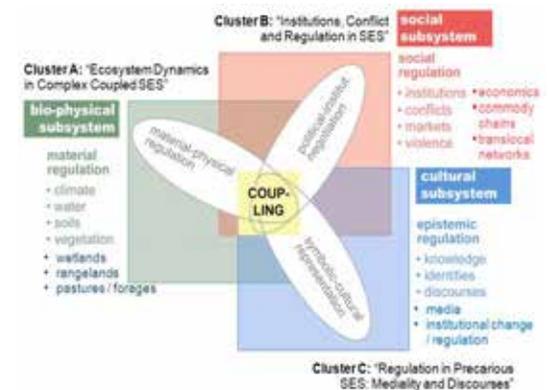
“Institutions, Conflict and Regulation”

- *The Resource-Economics Perspective*
- *Global Economics*
- *Translocal Relations*

Cluster C:

“Regulation in Precarious Systems”

- *Mediality and Local Creativity*
- *Institutional Change*



These are multi-disciplinary and inter-linked to study the coupling processes in complex social-ecological systems.