



1



What?

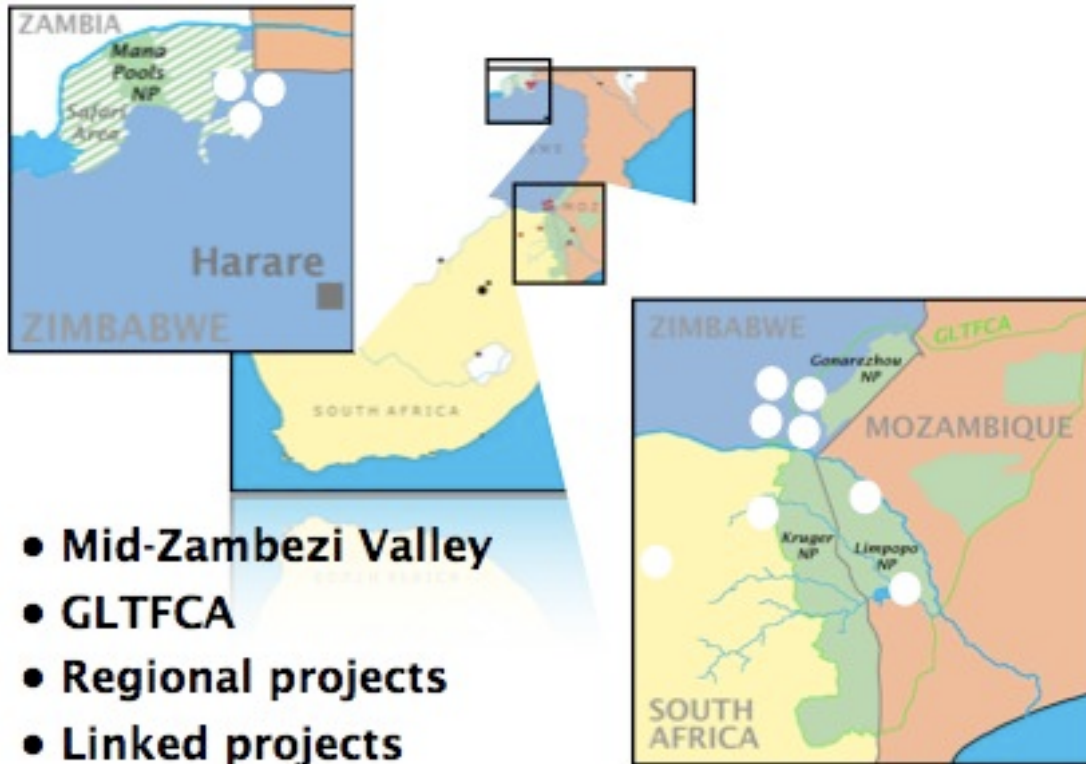
- collaborative research programme (WU funded)
- in southern Africa (also Brazil, NL)
- natural resources bound to *land* and *water*
- focus is on resource use *competition* (H-W interface)
- *interdisciplinary* programme
- currently: some 15 PhD projects in 3 countries
- two main research areas...



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Projects



- Mid-Zambezi Valley
- GLTFCA
- Regional projects
- Linked projects

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Background

from linear policy/science application models,
to *negotiated* knowledge

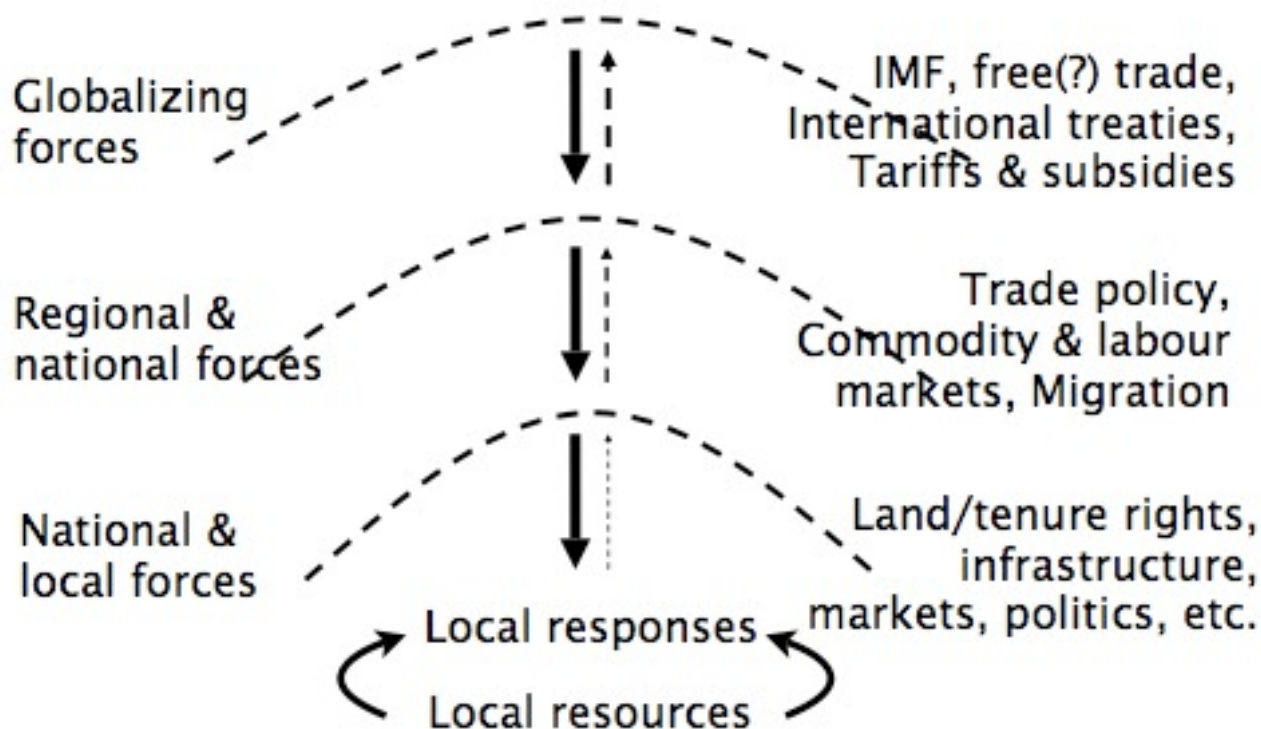
- science as producer of unequivocal knowledge
- participatory approaches (consensus among stakeholders)
 - power dynamics, exclusion and conflict
 - outside intervention vs. self-organization
 - often 'local-level' focused

—> *more modest role for science*

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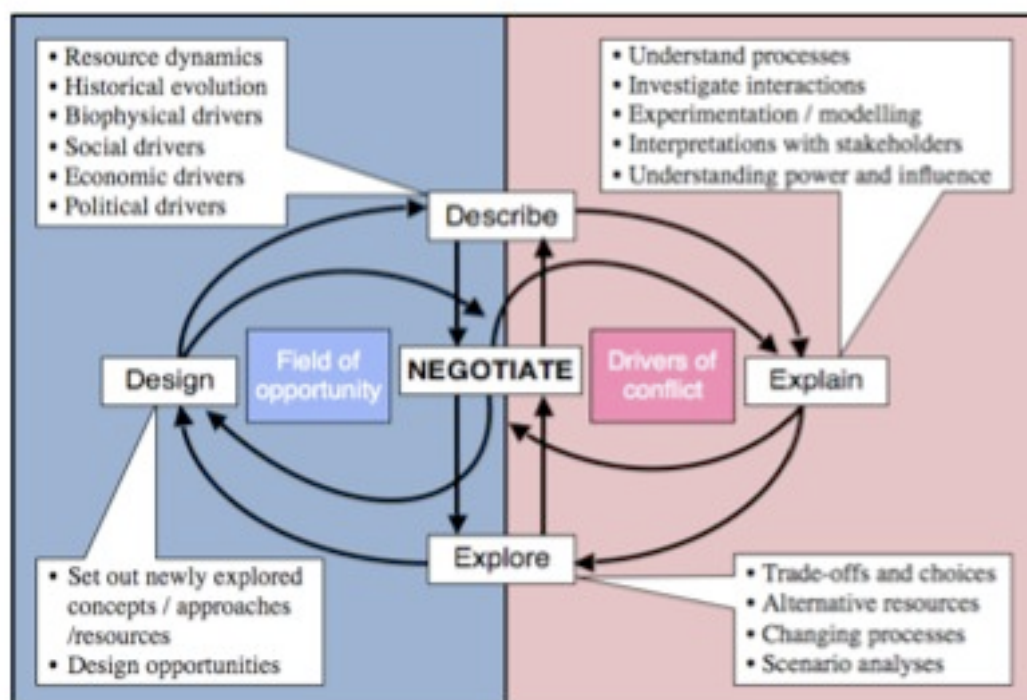
Constraints on local responses...



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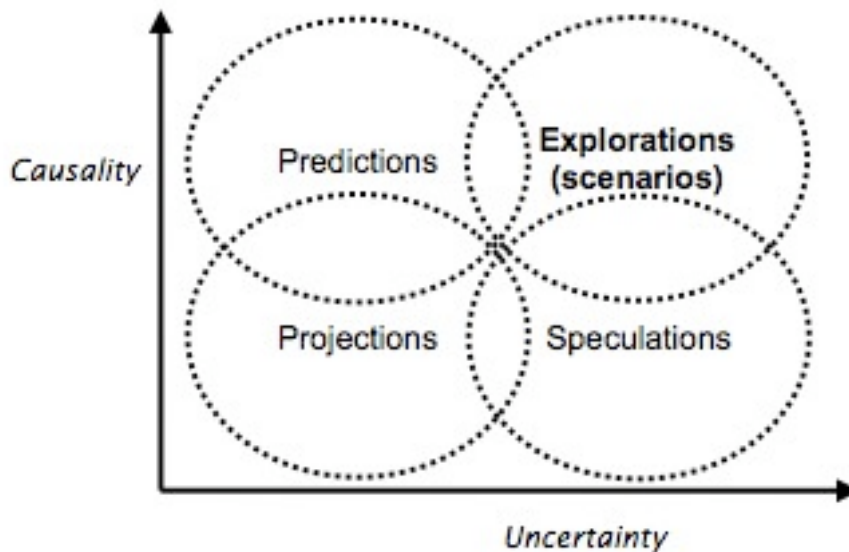
NE-DEED research method



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Future studies



Van Ittersum et al., 1998 *Agricultural Systems* 58, pp.309-330.

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Programme aims

to develop an interdisciplinary and interactive approach for:

- 1) understanding of competing claims and stakeholder strategies;
- 2) identification of alternative resource use options;
- 3) scientific support to **negotiation processes** between stakeholders, with the aim to jointly develop policy interventions that simultaneously improve livelihoods and the sustainable use of natural resources.

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Action for whom?

We envisage two main target groups:

1) aim is to give voice to the marginalized, allowing better articulation of their claims and needs;

2) the outcomes should assist governments and development agencies in targeting policies, activities and priorities.

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Competing claims – GLTFCA

South Africa

Competing discourses:
Land claims in the Soutpansberg
Yves van Leynseele

Balancing eco-tourism and
livestock production:
Implications for livelihoods and
the environment in Limpopo
Petronella Chaminuka



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Competing claims – GLTFCA

Mozambique

Competing claims & resettlement
Jessica Milgroom

Understanding the people-
conservation interface:
Alternative Futures for natural
resource management negotiations
Nicia Giva



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Competing claims – GLTFCA

Zimbabwe

Vulnerability and resilience of
competing land-based livelihoods
Chrispen Murungweni

Redressing asymmetry in resource
allocation through co-operation:
Livestock and wildlife systems
Xavier Poshiwa

Forest and people interactions:
Who is at risk?
Edward Mufandaedza

Participation in governance of
natural resources: Communities in
the GLTFCA (CASS collaboration)
Chaka Chirozva



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Competing claims – *Regional*

Predicting consumption of resources along gradients of nutrients and moisture

Abel Ramoelo

Soil carbon distribution & change as indicator of land quality and viability of land use

Armindo Cambule



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Programme

- Studies based on *local* problem identification
- Combined agro-ecological/social science
- Comparative perspective (between sites in/out of GLTFCA)
- (Obvious?!) links and new initiatives:
 - *CASS Scenario planning project*
 - *CIRAD Zimbabwe (human-wildlife co-existence)*
 - *Bio-fuel production systems (Mozambique, ...) (DGIS)*
 - ...

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www.competingclaims.nl

The screenshot shows the 'Publications' section of the website. It features a header with the title 'Publications' and a sub-header 'Flyer'. Below this, there is a 'Bulletin' section with a list of issues: No.1 (July 2006), No.2 (Nov.2006), No.3 (July 2007), No.4 (Sep.2007), and No.5 (Jan.2008). There is also a 'Papers, articles...' section with several entries, including one by Anderson, Jans A. (2007) and another by Mignone, Jans A. & Nijze J. (Springer, 2007).

The screenshot shows the main website page. The title 'Competing Claims on Natural Resources' is prominently displayed in a large font over a background image of a tree and a fence. Below the title, there is a navigation menu with links to Home, Programs, Projects, Events, Participating organisations, Links, Publications, and Contact. A small text block at the bottom of the page reads: 'Overcoming Mismatches in Resource Use through a Multi-Scale Perspective. Competing Claims is an inter-university research programme studying situations of competition over natural resource areas and use, aiming to guide stakeholders in dealing with (potentially conflicting) multiple uses of natural resources. It seeks to develop more equitable management systems that reduce land poverty, reduce conflict, and achieve more sustainable use of natural resources. Competing Claims is an inter-university research programme funded by the Netherlands Research & Innovation Fund (NWO) of Wageningen University, The Netherlands.'

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Hypotheses

1. The occurrence and intensity of competing claims on natural resources increases with **human pressures** irrespective of natural resource endowment;
2. Competing claims can be resolved through either new **technical options**, new **institutional arrangements**, or combinations of these;
3. Resolving or coping with competing claims will be achieved through '**win-win**' solutions for a subset of stakeholders, which may at the same time be '**win-lose**' solutions for other sets of stakeholders;
4. Better informed **negotiations**, using results from scientific analyses, will assist in resolving competing claims.

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thank you

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Collaborative programme

Botswana

University of Botswana

Mozambique

Eduardo Mondlane University

Netherlands

Wageningen University

Institute for Geo-Information Science & Earth Observation

South Africa

Agricultural Research Council

University of Witwatersrand

University of KwaZulu Natal

Rhodes University

University of Pretoria

Zimbabwe

University of Zimbabwe

Centre for International Forestry Research (CIFOR)



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info from: www.competingclaims.nl

Competing Claims on Natural Resources: Overcoming Mismatches in Resource Use through a Multi-Scale Perspective

Competing Claims is an inter-university research programme studying situations of competition over natural resource access and use, aiming to guide stakeholders in dealing with (potentially conflicting) multiple uses of natural resources. It seeks to develop more equitable management options that reduce rural poverty, reduce conflict, and achieve more sustainable use of natural resources.

See: <http://www.competingclaims.nl>

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info from: www.competingclaims.nl

Researchers at 8th AHEAD-GLTFCA meeting

Project summaries

Southeastern lowveld, Zimbabwe

Vulnerability and resilience of competing land-based livelihoods

Southeastern Zimbabwe is a drought prone region more suitable for both livestock and wildlife than for cropping. Local communities depend on livestock as their main source of livelihood, yet economists believe tourism with wildlife makes a lot more sense. This situation presents a conflict of interest between several stakeholders on best land-use options and natural resource conservation strategies. Already there are complex relationships between various sub-systems in the area: communal grazing / park grazing / smallholder grazing; water for cattle / for people / for wildlife; sorghum cropping / maize cropping; migration / cattle rustling / hunting or poaching, etc. Our work analyzes these linked systems and multi-scale patterns of resource use around which humans have organized themselves.

The research follows Walker & Salt (2006), who indicated that what is usually overlooked in the sustainability paradigm is that the key to sustainability lies in enhancing the resilience of communities, not in optimizing isolated parts of the system. Local communities are better able to withstand various cycles of change if they know more about the ecological drivers of their region, embrace rather than control the processes of natural change, and are empowered to make their own decisions about appropriate local developments; 'Long term prosperity needs 'resilience' not just efficiency' (Ludwig et al. 1997). Understanding complex human-environment systems thus involves understanding how cooperation and networks of interaction emerge from individual behaviour and feed back to influence such behaviour (Levin 2003, Easterling & Polsky 2003).

PhD researcher: Chrispen Murungweni (MSc)

References

Easterling, W.E. & C. Polsky. 2002. 'Crossing the complex divide: Linking scales for understanding coupled human-environment systems', in: R.B. McMaster & E. Sheppard (eds). *Scale and geographic inquiry*, Oxford: Blackwell.

Levin, S.A. 2003. 'Complex adaptive systems: Exploring the known, the unknown and the unknowable', *Bulletin of the American Mathematical Society* 40, pp. 3-19.

Ludwig, D., B. Walker & C.S. Holling. 1997. 'Sustainability, stability, and resilience', *Conservation Ecology* 1(1): art7.

info from: www.competingclaims.nl

Walker, B. & D. Salt. 2006. *Resilience thinking: Sustaining ecosystems and people in a changing world*. Washington DC: Island Press.

info from: www.competingclaims.nl

Knowledge encounters, power and participation in governance of natural resources: Experiences from communities in the Great Limpopo Transfrontier Conservation Area

In Southern Africa, transfrontier parks (newly defined conservation areas) have brought many new challenges to local populations living in or adjacent to these parks, in newly- defined conservation areas. The creation of biophysical spheres over political boundaries opened up existing sub-national administrative boundaries, thus creating new landscapes and management entities. These transnational parks and conservation areas stress the importance of local communities' participation and the socio-economic benefits of conservation for local communities. However, the planning processes and resource use negotiations often result from concomitant higher levels. Therefore, new participatory (scenario) planning and research initiatives are being developed with the aim to empower local communities in the context of these newly defined bio-physical and administrative entities to strengthen their adaptive management capacity. This study seeks to analyse (compare, and evaluate) transfrontier initiatives, focusing on the politics of knowledge within these newly emerging local planning processes. Using the experiences of Zimbabwean (and possibly Mozambican/South African) communities affected by the GLTFCA as an empirical case, the research builds primarily on anthropological and ethnographic research methodologies, such as situational, network and discourse analysis, to understand knowledge contestation in community-based planning trajectories that occur within the context of newly defined resource and landscape transfrontier zones.

PhD researcher: Chaka Chirozva (MSc) – Project in collaboration with CASS, University of Zimbabwe

Redressing asymmetry in resource allocation through co-operation among livestock & wildlife systems

One important cause of failure in natural resource management is mismatch of scales (Folke et al. 1998). These occur when the scales of ecological dynamics and the scale of social organization are aligned in a way that negatively affects an ecosystem (Cumming et al. 2006). The consequences of scale mismatches for the environment may be severe: inappropriate management often results in a loss of natural landscape heterogeneity and further impacts on broad-scale ecological processes such as the movement of species through landscapes (Cumming et al. 2006). In general, degraded ecological systems become less able to provide the goods and services that humans rely on and this subsequently leads to degraded social systems which result in a net decrease in human well-being. Therefore, this project seeks to add to an understanding of the topic of scale mismatches by studying spatio-temporal dynamics of resources shared between wildlife and livestock. The hypothesis to be tested is: harmonization of the socio-economic organization and ecological scales at the appropriate level, would lead to optimal allocation of resources between wildlife and livestock. Implying increased production and higher economic welfare for the majority of the stakeholders in the long term. This is based on the subsidiarity principle (Berkes 2006), which stipulates that 'decisions should be taken as closely as possible to the citizen' and that action should be taken at the level where it is most effective (Karlsson 2007).

PhD researcher: Xavier Poshiwa (MSc)

References

Berkes, F. 2006. 'From community-based resource management to complex systems: The scale issue and marine commons', *Ecology & Society* 11(1). [online] URL: <http://www.ecologyandsociety.org/vol11/iss1/art45/>

Cumming, G.S., D.H.M. Cumming & C.L. Redman. 2006. 'Scale mismatches in social-ecological systems: Causes, consequences, and solutions', *Ecology & Society* 11(1). [online] URL: <http://www.ecologyandsociety.org/vol11/iss1/art14/>

Folke C., L. Jr. Pritchard, F. Berkes, J. Colding & U. Svedin. 1998. *The problem of fit between ecosystems and institutions*. Bonn: International Human Dimensions Programme on Global Environmental Change (IHDP).

Karlsson, S.I. 2007. 'Allocating responsibilities in multi-level governance for sustainable development', *International Journal of Social Economics* 34: 103-126

Limpopo province, South Africa

Balancing eco-tourism and livestock production: Implications for livelihoods and the environment in Limpopo province

Conservation Areas, such as the recently established Great Limpopo Transfrontier Conservation Area (GLTFCA), present an opportunity for emerging land uses to complement agriculture as means of livelihoods, particularly where agricultural potential has been limited and incomes and employment levels are low. Engagement in eco-tourism constitutes one such opportunity for rural communities in South Africa, but exacerbates competing claims on land. The limited availability and productive capacity of land as well as other socio-economic constraints necessitates balancing eco-tourism and existing livestock production as land use alternatives for improved rural livelihoods. To achieve this, information on possible economic impact of the GLTFCA and quantitative information on the potential of eco-tourism and livestock production as land use alternatives, is required.

This study aims, in consultation with local stakeholders, to contribute towards this gap in knowledge by identifying socio-economic consequences of the emergence of alternative land use practices and analyzing possible options and trade offs for improved household welfare in the conservation area. The study develops a framework at household level considering impacts at higher levels for evaluating eco-tourism and livestock as land use options. Furthermore, it applies a spatially explicit bio-economic model based on this framework to evaluate alternative scenarios developed in consultation with stakeholders considering socio-economic and bio-physical constraints. Economic benefits of livestock production to the household are studied through valuation of monetary and non-monetary livestock products, and the potential economic benefit of eco-tourism is investigated through choice modeling techniques, and then integrated to determine possibilities for improved livelihoods.

PhD researcher: Petronella Chaminuka (MSc)

Limpopo National Park area, Mozambique

Agent-based simulations of land use negotiations with spatial land use models: Dealing with uncertainty in the Great Limpopo TransFrontier Conservation Area (GLTFCA)

This research project focuses on the multiple-use (or buffer zone) of the Limpopo National Park (LNP), along the Limpopo River. Using qualitative, quantitative and spatial tools, it aims to describe, analyze and model the livelihood system of people affected by the restriction policies of the park and, simultaneously, seeking to contribute to alternative livelihood pursuits for these people.

The research seeks to develop a spatially-elaborate characterization of livelihoods in the Limpopo National Park area. This livelihood typology will then be used to analyze and discuss the impact of the different restrictions on natural resource use with different stakeholders, and form the basis for the development of alternative resource use scenarios. A central concern of this research project is therefore: Can people's natural resource-based livelihood pursuits and conservationist objectives be (made) compatible?

PhD researcher: Nicia Giva (MSc)

The role of social and technical innovations in resolving competing claims over natural resources

As a result of the implementation of the Limpopo National Park in 2001, population resettlement is planned for 7,000 of the 27,000 people currently living inside the park boundaries. The resettlement initiative is being promoted as a development project according to World Bank policy standards, but resettlement is widely known to be associated with a series of negative livelihood impacts. In order to understand these risks imposed by resettlement from the LNP, this interdisciplinary research aims to analyze the process of negotiation and decision-making that determines the conditions under which resettlement will occur, and quantify the differences in availability of natural and non-natural resources between the pre- and post-resettlement sites. This research also engages in designing alternatives for mitigating risks placed on food security by this change in access to resources, specifically the potential for improved germplasm to increase maize production under drought conditions.

PhD researcher: Jessica Milgroom (MSc)