Competing land uses in Africa: the view from above & below

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Project background

“Buy land, they’re not making it anymore” – Mark Twain

The dry forests and woodlands of Africa are the last major area of the world that is suitable for agriculture but has not yet been converted to farmland. Demand for food in sub-Saharan Africa will triple by 2050, bringing huge pressure to bear on this remaining wild land, and leading to major conflict with policies to conserve and restore natural landscapes.

Fig 1. Land use change underway in southern Africa: Trees felled to make charcoal cooking fuel for urban areas; small scale shifting agriculture; large scale commercial agriculture for export to Europe.

Our recent work shows that these pressures are acute, with agricultural policy promoting the expansion of farmland into forests and woodlands, while forest policy seeks to reduce deforestation and restore degraded landscapes as part of international commitments to Reducing Emissions from Deforestation and Degradation (REDD+) and the Bonn Challenge (a global effort to restore 150 million hectares of deforested and degraded land by 2020). Meanwhile, there are strong political and logistical barriers to reliance on imported food.

This project will examine this conundrum from two scales and knowledge domains – national land cover analysis and local/farmer perspectives – in an effort to understand if these competing policy goals can be resolved in a manner that benefits the rural poor.

Firstly, you will construct plausible scenarios of future land use in three countries (Zambia, Tanzania, Ethiopia), in close cooperation with national and international experts (via the SNAPP working group: see https://snappartnership.net/teams/food-and-forests-in-africa/). This will allow you to explore future land use changes under different policy goals. Next, using state of the art remote sensing methods and land cover data, you will map the areas of the three countries where the policy goals collide and identify “hotspots” of land use pressure. To obtain a more grounded perspective, and a deeper understanding of these pressures, you will then conduct fieldwork in one country (probably Zambia), interviewing farmers and forest-dependent people, as well as land use planners and policy makers. By conducting participatory land use planning and scenario analysis at the village scale, you will be able to understand the hopes and fears of local land users and see how these articulate with international policy. Through IIED’s networks and the SNAPP working group members, you will be able to communicate your results to international policy makers.
Key research questions

a. What are the plausible pathways by which African countries can meet their policy goals of agricultural expansion, reduced deforestation and landscape restoration?

b. Where is the conflict between agricultural production and forest conservation most acute?

c. How do local people interpret these competing land use pressures, and what landscapes do they imagine for a better future for themselves?

Methodology, including a timetable for the programme of research

Year 1. Work with the SNAPP working group to conduct scenario analysis of likely land use futures in the three countries. Develop the land cover analysis to map the hotspots of land use conflict, and plan fieldwork.

Year 2. Conduct fieldwork in several villages, and undertake in-country interviews.

Year 3. Write up, produce policy briefs, attend international policy events.

Training

Ongoing training will be provided by the supervisors in scenario building, land use mapping, and social science methods. In addition, the student will have the opportunity to work with a wide range of experts in forest and agricultural policy, as part of the regular meetings of the SNAPP working group and associated projects. A comprehensive training programme will be provided comprising both specialist scientific training and generic transferable and professional skills.

Requirements

This project would suit a student with an interest in international development and rural livelihoods. You will develop expertise in both quantitative and qualitative methods, and the ability to handle spatial data; skills very much in demand in many research and applied contexts. You will also develop skills in communicating science to a wide range of audiences. This PhD would suit students with a wide range of backgrounds, including development studies, geography, environmental science, and quantitative social science. More important than past experience or existing knowledge is the ability to learn new methods and concepts.

Further reading / references


Project summary

How can we resolve the conflict between food production and forest conservation in sub-Saharan Africa? How do local views fit with international policy commitments?