Balancing conservation and cash cropping in Madagascar

MADAGASCAR is home to unrivalled natural beauty and unique species richness of world-wide significance.[1] These attributes and concerns about local deforestation led to creation of several protected areas – including the Masoala National Park (1997) and the Makira Natural Park (2012) – with funding from various national and international actors. Located in the island's northeast, the Masoala and Makira parks are two of the largest conservation zones in Madagascar and harbour major shares of its endemic biodiversity, including endangered animal species and numerous plants with medicinal qualities.[2]

Entering Fizono village from the north (2019). Photo: Onintsoa Ravaka Andriamihaja

The protected areas provide global benefits such as biodiversity preservation and carbon storage, but they create serious challenges for the local Malagasy people who rely on these landscapes. They limit the land and forest resources available for food, shelter, income, and more. A better alignment of the visions and actions of the various land users is needed to enable sustainable regional development.

KEY MESSAGES

- In north-eastern Madagascar, the competing interests of conservationists, actors participating in cash-crop value chains, and local farmers put pressure on local land resources.
- Deforestation related to subsistence farming and cash cropping remains ongoing.
- The well-being of local people overwhelmingly depends on ecosystem services from surrounding forests, subsistence farming, and cash cropping.
- The competing land users have distinct land-related visions and values. Aligning them is crucial for sustainable development. But coordination and negotiation between the concerned stakeholders is lacking.
- Distant and local conservation and cash-crop actors must make their land-related visions explicit, negotiate on behalf of consensus or compromise, and be transparent about the "winners" and "losers" of different pathways. Targeted projects could help to test different pathways towards shared visions of development.

Tension between conservation and agriculture

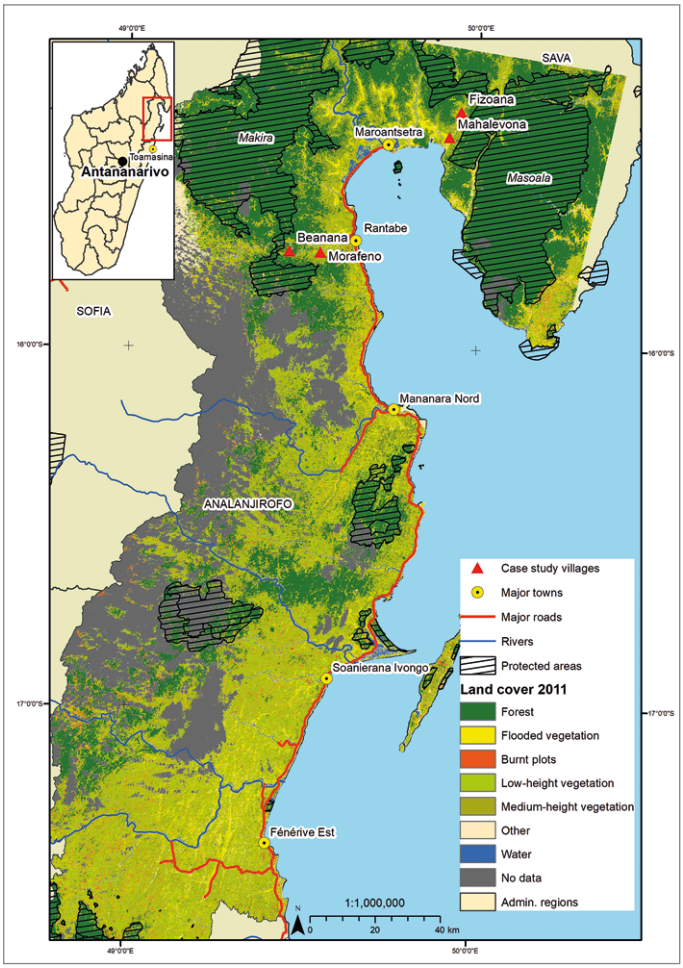
Since pre-colonial times, farmers in north-eastern Madagascar have practised shifting-cultivation subsistence farming to ensure rice supplies in the villages. Authorities have long blamed shifting cultivation for local deforestation and species loss. This and other factors galvanized high-level support for creation of protected areas.[3]

The "telecoupled landscapes" project investigated land use changes in two case study landscapes in north-eastern Madagascar. Results showed that between 1990 and 2017, deforestation continued in our study areas at an average rate of about 1.25%, albeit with strong fluctuations from year to year.[4] With few other options available, local populations depend on subsistence farming, forest resources, and income from cash cropping to ensure their well-being.[5] Park-related access restrictions that limit their ability to farm or hunt bush meat[6], for example, can eventually become food security issues.

Crucially, our research shows that in addition to shifting cultivation, cash cropping is now driving deforestation in north-eastern Madagascar.[7] Between 2015 and 2019, booming global vanilla prices fuelled a local resurgence in vanilla growing. There are now about 80,000 vanilla farmers along the country's east coast,[8] and vanilla exports are a major contributor to the country's economy.[9] In addition, the establishment of the protected areas themselves also caused some initial deforestation. They triggered a scramble to secure land by clearing areas for cultivation and staking claims before the protected status went into effect. Finally, cyclones and national political instability were also responsible for forest loss.[10] Overall, looking ahead, our analysis of land use decision-making suggests that farmers will continue growing cash crops well into the future.[11] However, a recent sharp drop in vanilla prices highlights the risks of market dependence for Malagasy farmers.

Lack of collaboration exacerbates difficulties

Research by our team also took a detailed look at the broader, geographically distant international networks behind conservation and cash cropping in north-eastern Madagascar. In particular, we



Location of case study landscapes in Analanjirofo Region, north-eastern Madagascar. © Julie Zähringer

looked for links between the two domains. We discovered that their far-reaching social networks scarcely intersect – even at higher levels where governance decisions should be taken.[14] Indeed, the only intersection occurs at the farmer level. Hence, the two domains with diverging agendas influence the same farmers, leading to local land competition. Interestingly, our analysis shows that cash-crop trade actors at the *district level* have the most potential agency and appropriate social network to influence the system.

Local people's visions for the future

Since land competition manifests locally, it is important to understand local land users' visions for the future. The local people we worked with envision a future that encompasses accessible villages, a healthy and educated population with high purchasing power, access to quality food, proper housing with electricity, clean drinking water, good social relations, and safe villages. And they envisage maintaining access to sufficient agricultural land for themselves and their descendants, obtaining better know-how in cash cropping, and continuing rice production to ensure their subsistence needs.[15]

Bringing stakeholders together and balancing goals

To enable sustainable regional development, distant and local conservation- and cash-crop actors have to make their land-related visions explicit and negotiate consensus goals or compromises. This will require transparency about the "winners" and "losers" of different regional development paths. Our results show that conservationists could increase awareness about their aims by linking up with the wider social network of cash-crop actors. Policymakers could purposefully bring the competing actors together to align their agendas.[16] A roundtable format could enable discussions with a view to consensus-building, identification of shared visions for the future, and concrete collaboration. In addition, targeted projects could help to test different pathways towards shared visions of development. Topics that could be brought forward include *deforestation-free commodity production, sustainable intensification*,[17] *agroecology*,[18] *diversified agriculture*, and support of *cooperatives* or other organizational structures that facilitate *commoning*.[19] Importantly, any such activities should be accompanied by a monitoring system that enables constructive social learning.

Telecoupling: A new perspective on land use governance

The term **"telecoupling"** refers to networked connections between geographically distant social-ecological systems.[12] It emphasizes how faraway ecosystems, actors, and institutions in one place are linked with local ecosystems, actors, and institutions in another. These links shape land use change and governance.[13] Telecoupling can cause land competition when local and distant actors try to exercise claims over the same land. In Madagascar, for example, prices for vanilla and clove have increased while demand for biodiversity conservation has risen – both in response to changes in remote social-ecological systems. This is causing tension between cash-cropping and conservation at the local level in north-eastern Madagascar.

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