

The logo for IAMO, consisting of the lowercase letters 'iamo' in a bold, sans-serif font.

Leibniz Institute of Agricultural Development
in Transition Economies

The logo for UFZ, featuring the letters 'UFZ' in a bold, blue, sans-serif font with a green arc above the 'F'.

HELMHOLTZ
Centre for Environmental Research

The logo for MIGSOKO, featuring the word 'MIGSOKO' in a bold, green, sans-serif font with a brown rectangular frame around it.A wide-angle photograph of a mountainous landscape in Ethiopia. The foreground shows a valley with terraced fields and small, thatched-roof huts. The middle ground is dominated by rolling hills and valleys, with some trees and more huts. The background consists of vast, layered mountain ranges under a blue sky with scattered white clouds.

Reciprocal linkages between environmental change and migration: Lessons from Ethiopia

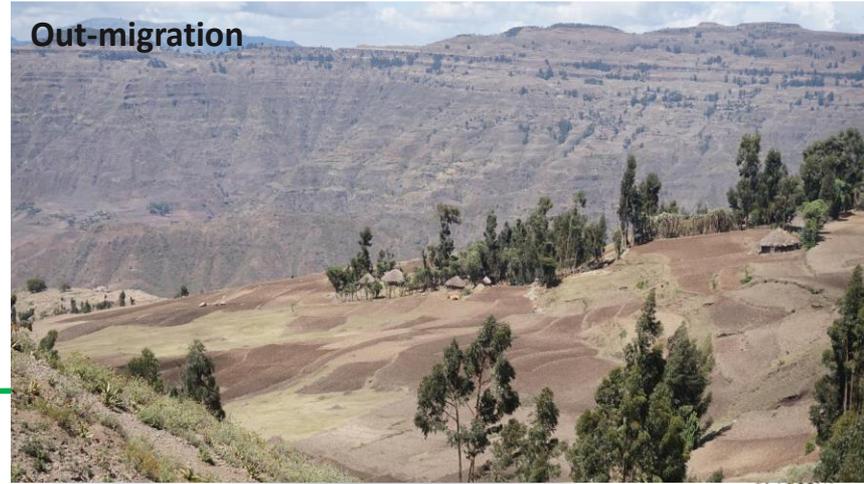
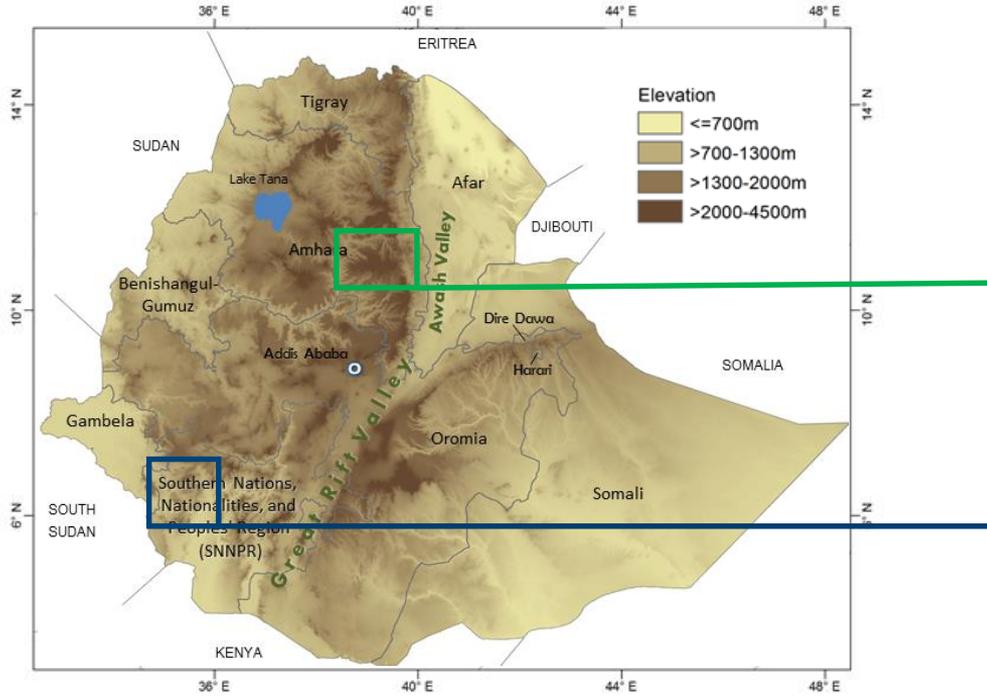
Kathleen Hermans, Juliane Groth,
Charlotte Wiederkehr, Patrick Sakdapolrak

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- Illustrate feedback mechanisms through which environmental change contributes to migration and how consequent in-migration may contribute to changes of the (natural) environment
- Focus on rural-rural migration



Case study Ethiopia



Out-migration

- Qualitative approach, 2017/18, 2019
 - Interviews with regional experts (n=6), Focus Groups (n=18), Household interviews (n=42), Interviews with returnees (n=20), participatory workshop (n=1)
 - Qualitative Comparative Analysis (QCA)
 - Participatory Bayesian Belief Network Analysis

In-migration

- Quantitative Household Survey (n=224), 2019
 - socioeconomic characteristics, livelihood activities, land use, availability and use of forest products, forest governance and participatory forest management
 - Random forest regression tree models

Environmental change increases migration need with financial means and migration experiences enabling migration

- Increasing rainfall variability and land degradation increase migration needs and trigger migration, especially through declining agricultural production and food insecurity
- Diversification option and sharing migration experience among household members are essential for migration
- Reduces risks and financial burden of migration and influences aspirations
- It is not the “poorest of the poor” who leave
- Availability of two rainy seasons supports migration (higher agricultural diversity and production)

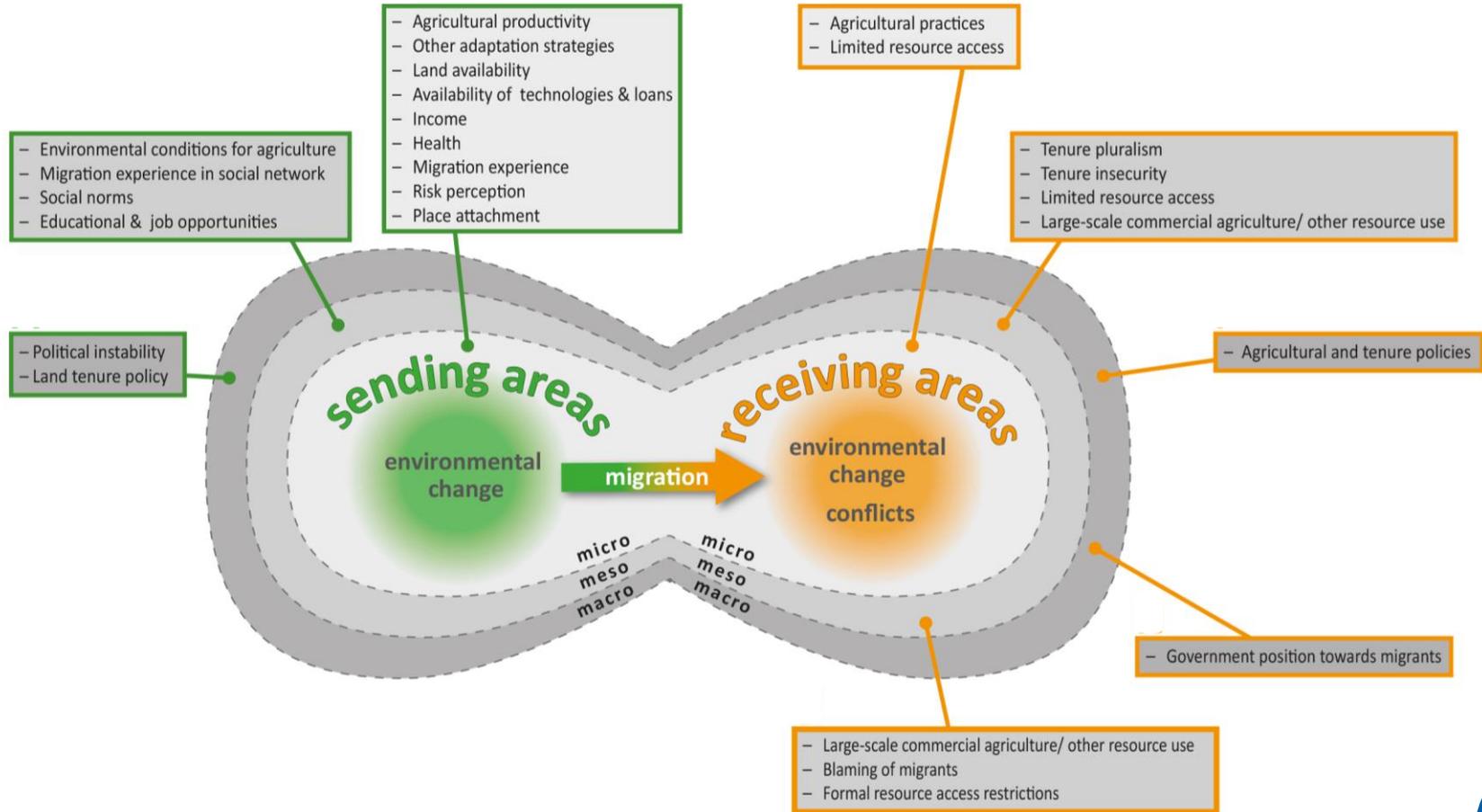
Environmental change increases migration need but hampers migration abilities through social norms and lack of financial resources

- Climate change can undermine migration abilities, for example through diminishing household resources and assets, which are a prerequisite for migration.
- Lack of resources, e.g., because of lacking (non-)agricultural income and scarce employment opportunities nearby, people stay involuntarily
- Especially households where agricultural production is limited to one rainy season
- Gender roles

Migration to rural areas triggers land use change and deforestation through livelihood transitions and adopted land management

- Population growth increased the demand for agricultural land and land tenure pluralism have contributed to tenure insecurity
- Local population perceives migrants from the northern highlands as being successful agriculturalists
- Agricultural policies support expansion and intensification of agriculture and promote the production of cash crops for national and international markets.
- Livelihood transition of the local population from primarily forest users towards agriculturalists, thereby aggravating deforestation

Multi-level mediating factors



Publications and material



- <https://www.ufz.de/migsoko/>
- <https://www.youtube.com/watch?v=Qd1Lu481MNY>
- Groth, J., Ide, T., Sakdapolrak, P., Kassa, E. & Hermans, K. 2020. Deciphering interwoven drivers of environment-related migration - A multisite case study from the Ethiopian highlands. *Global Environmental Change*, vol. 63.
- Groth, J., Hermans, K., Wiederkehr, C., Kassa, E. & Thober, J. 2021. Investigating environment-related migration processes in Ethiopia - A participatory Bayesian network. *Ecosystem and People*, vol. 17.
- Hermans, K. & Garbe, L. 2019. Droughts, livelihoods and human migration in Northern Ethiopia. *Regional Environmental Change*, vol. 19.
- Groth, J., Seppelt, R., Sakdapolrak, P., Senbeta, F., & Hermans, K.: Why smallholders stop engaging in forest activities - The role of migration in livelihood transitions in forested landscapes of southwestern Ethiopia. *Ecology and Society* (forthcoming).

Contact

- E-Mail: Khermans@iamo.de
- Twitter: [hermans_kath](https://twitter.com/hermans_kath)

