

# BOOK OF ABSTRACTS

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## Forest restoration strategies, ecosystem service delivery and trade-offs at site and landscape level in Ethiopia

S3.2 Restoring forests and trees: Balancing goals, interests and trade-offs

Alfred Kokas Aleje<sup>1,2</sup>

Vianny Ahimbisibwe<sup>3,4</sup>, Andreas Bolte<sup>1,2</sup>, Nicole Wellbrock<sup>1</sup>, Martin Ehbrecht<sup>2</sup>, Sven Günter<sup>3</sup>, Matthias Dieter<sup>3</sup>, Ralph Mitlöhner<sup>2</sup>, John Stanturf<sup>5</sup>, Markus Höhl<sup>6</sup>

<sup>1</sup> Thünen Institute of Forest Ecosystems, Eberswalde

<sup>2</sup> Georg-August-Universität, Dept. of Silviculture and Forest Ecology in the Temperate Zones, Göttingen

<sup>3</sup> Thünen Institute of Forestry, Hamburg

<sup>4</sup> Ecosystem Dynamics and Forest Management Group, School of Life Sciences, Technical University of Munich (TUM), 6 85354 Freising, Germany

<sup>5</sup> Estonian University of Life Sciences, Tartu, Estonia

<sup>6</sup> No affiliation

**Abstract:** Deforestation and forest degradation are becoming a global concern especially under current climatic changes and human population growth trends. Forest landscape restoration however, offers an opportunity to ameliorate impacts, end poverty, build climate resilience and enhance biodiversity. For this to happen, there is need to evaluate the context-specific success and failure factors in order to enable adaptive management. For many restoration projects worldwide, it is shown that there is a lack of knowledge and capacities for local forest restoration implementation, for example with regards to suitable seed sources and plant material, establishment techniques, as well as long-term tending of the restored forests. Furthermore, the goals and importance of ecosystem services differ among stakeholders leading to trade-offs and possible governance conflicts. We compare contributions of passive and active approaches, and evaluate perception of actors on societal benefits from restoration.

We conducted a rigorous assessment of biophysical and socioeconomic factors affecting restoration in Ethiopia as part of the FLESRA project. Forest and soil inventory of active and passive restoration sites, and identification of contextual factors was done. Data from 1,519 plots representing 7 forest stand types, 145 key informants and 371 farmer interviews across Oromia and Southern Nations regions was collected. Analyses of this data is expected to help to derive recommendations for best practices, and develop suitable tools for successful implementation and management of restoration.

Preliminary results show that management and soil properties play a key role in the performance of restoration especially among the active strategies. Active restoration strategies perform better especially in timber production and biomass, while passive restoration strategies are better in terms of plant diversity improvement at site level. At landscape scale, active restoration approaches contribute greatly to overall observed plant diversity. Also, among the strategies, timber and fuel are the most ranked direct services, while carbon absorption and erosion control are the most perceived indirect services. Surprisingly, actors do not perceive biodiversity as important across strategies.

Results suggest the importance of adoption of a mixture of passive and active restoration approaches in landscapes for multiple benefits, implementation of proper management and increased actor participation in restoration.