



Tropentag, September 10-12, 2025, hybrid conference

“Reconcile land system changes
with planetary health”

Planetary health and farmer’s livelihoods in sub-Saharan Africa – first things first!

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Abstract

The planetary health and planetary boundaries frameworks are fundamentally synergistic and the latter has gained substantial attention with warnings about six boundaries having surpassed safe levels being abundant. While African farmers hardly interact with most of the planetary boundaries, decisions that affect African farmers and farming systems are influenced by the planetary boundary framework. Although progress has been made in parts of the continent, farming systems in sub-Saharan Africa are still unable to provide the necessary goods and services to deliver acceptable livelihood conditions to millions of smallholder families. The challenges presented by an ever-growing and young population, urbanisation, climate change, and civil strife further aggravate this situation. In recent times, several paradigms have been formulated on how to address the above situation, including sustainable intensification, agro-ecology, nature-positive agriculture, or regenerative agriculture. The presentation will focus on how to reconcile the need for improving farmer’s livelihoods within planetary boundaries. Emphasis will be placed on climate change, biogeochemical cycles, biodiversity, and land system change, planetary dimensions that interact most directly with farming systems. The discussion will focus on how African farming systems affect above dimensions, today and in future, and which options and approaches are available and realisable to produce enough healthy and affordable food while avoiding the degradation of the ecosystems that life depends on, acknowledging unavoidable trade-offs. Lastly, emphasis will be placed on new tools and approaches available nowadays, especially in the digital space, to assist in addressing farmers’ livelihoods within a safe planetary operating space.