

Quantifying resilience of traditional smallholder farming systems and natural resources in the context of conflict and war: a case study of Northern Ethiopia

VLIR-UOS Short Initiative (2023-2025)



The livelihood of the rural population in the Tigray region of northern Ethiopia relies mainly on small-scale subsistence agriculture. However, the sustainable management of natural resources is hampered by a lack of resources and capacity, as well as disruptions due to climate variability and change. As a result, agricultural productivity is low and food insecurity is high. Farmers have developed various local strategies to deal with the stressors, while the regional government has implemented a strategy based on "Conservation-based Agricultural Development Led Industrialization (ADLI)" to improve agricultural production and food security through restoration, conservation and development of natural resources. Accordingly, remarkable achievements have been made over the past three decades. Unfortunately, most of these achievements have been disrupted by the two-year war (2020-2022). This VLIR-UOS SI project aims to quantify the resilience of smallholder agricultural systems and natural resources in the aftermath of war and support the restoration of livelihoods of local communities that recover from this conflict. The research activities will be carried out by several MSc students, three staff members of Mekelle University (MU), in collaboration with four researchers from Ghent University (UGent). Focus will be put on studying local farming systems, (ii) vegetation cover, (iii) hydrology, and (iv) land degradation. The SI project aims at re-establishing the fruitful collaboration between the departments of Geography of UGent and MU. Capacity of MU and that of various local stakeholders will be increased to address impacts of conflict and war on traditional smallholder farming systems and natural resources. In addition, knowledge will be transferred to local communities.

The SI project has a duration of 2 years (September 2023 – August 2025) and a budget of 70.000 euros.

Research unit

Physical Geography

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