

## Background and Rationale

Climate change is a major development challenge that affects the livelihoods of communities throughout the world (Kolawole et al., 2016). It affects all economic sectors to some degree, but agriculture is among the sectors most sensitive and inherently vulnerable to climate variability (Paul et al., 2016).

In Ethiopia the impact of climate change on the socio-economic fabric of the society is tremendous. This change has affected agriculture and its ecosystems on which the rural communities are dependent on for their livelihoods (Auci et al., 2018). Wolaita Zone, Southern Ethiopia, is a place of high population density and dependent on small-scale labour-intensive agriculture. It is one of the most climate-vulnerable 'hotspots' in Africa, underpinned with a very weak adaptive capacity (Bedeke et al., 2018). This research study, therefore, will determine the climate change impacts experienced in the area and its effect on livelihood strategies of farm households, and vulnerability of and adaptation strategies by the farm households. It aims to contribute to the realization of Target 1 and 2 of the Goal 13 of the Sustainable Development Goals.

## Overall objective

To determine the affects of climate change on farm household's livelihoods in Wolaita Zone, Southern Ethiopia.

## Specific objectives

1. To identify the major climatic changes experienced by farm households in Wolaita
2. To determine how these changes affected livelihood strategies of farm households
3. To determine the vulnerability of the farm households to climate risk
4. To assess households' adaptive strategies in response to the impact of climate change

## Methodology

**Study design:** Mixed methods research (Qualitative & Quantitative)

**Sampling Techniques:** Multi-stage sampling Techniques

**Sample size:** 400 farm household heads- determine by Yamane Formula  $n=N/(1+N(e)^2)$

**Data sources:** Farm household members, Extension workers, Local leaders, Government officials and Local, Regional and National Metrology Agency, Zonal and Woreda Agricultural Office, Finance and Economic Development office, Animal and Fish Development office and Non-Governmental Organizations such as Concern and the Catholic Food Security Department).

**Target group:** Farm households in Wolaita

**Data collection tools:** Survey Questionnaires, FGD, Key informants and Observation

**Data Analyses:** - Multinomial Regression, Livelihood Vulnerability Index (LVI) and NVivo

## References

- Auci, S., Castellucci, L. & Coromaldi, M. 2018, "The impact of climate change on the distribution of rural income in Ethiopia", *International Journal of Environmental Studies*, vol. 75, no. 6, pp. 913-931.
- Bedeke, S., Vanhove, W., Gezahegn, M., Natarajan, K. & Van Damme, P. 2018, "Adoption of climate change adaptation strategies by maize-dependent smallholders in Ethiopia", *NJAS - Wageningen Journal of Life Sciences*.
- DFID, 1999. Sustainable livelihoods: Lessons from early experience (Vol. 7, No. 1). London: Department for International Development.
- Kolawole, O.D., Motsholapheko, M.R., Ngwenya, B.N., Thakadu, O., Mmopelwa, G. & Kgathi, D.L. 2016, "Climate Variability and Rural Livelihoods: How Households Perceive and Adapt to Climatic Shocks in the Okavango Delta, Botswana", *Weather, Climate, and Society*, vol. 8, no. 2, pp. 131-145.

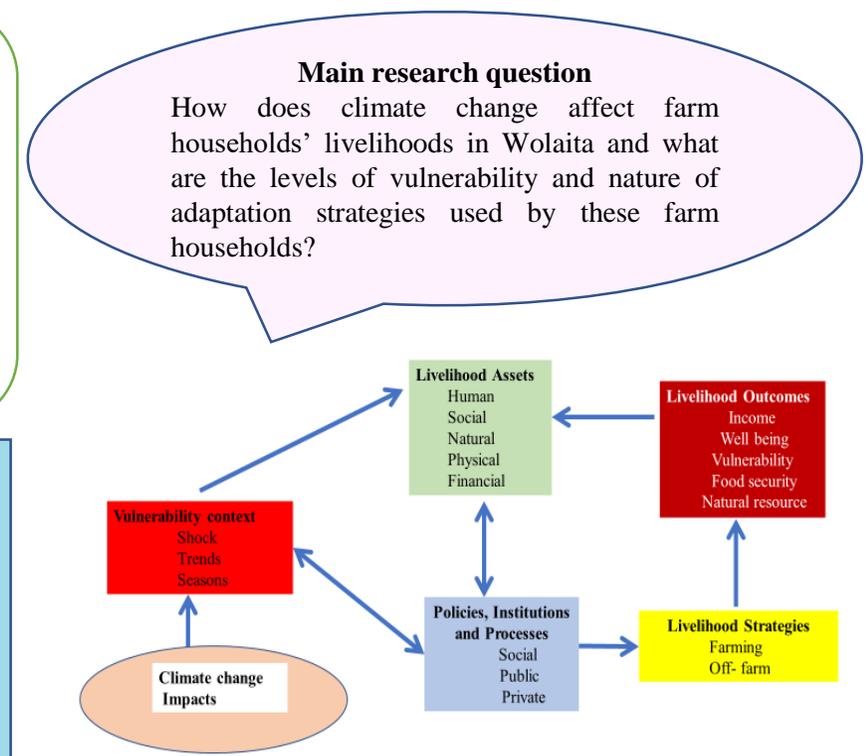


Figure 1: Study theoretical framework based on Sustainable Livelihoods Framework (adapted from: DFID,1999)

## Outcome

- Generate important policy messages for more comprehensive responses to climate change impacts on livelihood strategies, vulnerabilities and adaptation mechanisms of farm households in Ethiopia
- Identification of local adaptation strategies that could serve as a framework for stakeholders to support interventions that can mitigate vulnerability situations for farm households