

INFORMATION SHEET

GROWTH LARS: HOUSEHOLD WATER ECONOMY ASSESSMENT (HWEA)

The Household Water Economy Assessment (HWEA) is one of the components under RIPPLE's Long-term Action Research Study (LARS) on the theme of "Growth".

OVERVIEW

A central objective Growth LARS in Oromiya Region focuses on assessing opportunities for, and challenges to, building resilience of communities and households vulnerable to climate change related hazards, with the broader objective of informing government and agency planning and implementation on climate change policy, planning, and response.

Identifying appropriate water sector policies that aim to mitigate climate change related hazards and build resilience of at-risk populations requires an analytical framework with the capacity to identify which areas are vulnerable to specific hazards, and within those areas, which groups are vulnerable – when, why, and to what extent.

STUDY APPROACH

The central objective of the HWEA component of the Growth LARS is to provide an information system and analytical tools to assess water access of different wealth groups at household level within different livelihood zones. The information system developed through the HWEA will be both *predictive* and *prescriptive*: it will have the capacity to assess actual or future impact of water-related shocks on household access to water; as well as to identify appropriate intervention levels, geographic and socio-economic targeting, and – combined with HEA information systems already in place¹ – it aims to inform and identify a holistic basket of water and livelihoods-related interventions that most effectively address the specific ways in which certain populations are vulnerable to different water-related hazards.

¹ Household Economy Assessment (HEA) baselines, which assess household access to food, income, and expenditure, have been completed for all of Ethiopia (173 livelihood zones) under the Government of Ethiopia Early Warning Department, now housed within the Ministry of Agriculture. Baselines have been completed by the LIU, FEWS NET, and SCUUK.

The major objectives of the Household Water Economy Approach (HWEA) under the Growth LARS include the following:

1. Assess baseline household access to water for various water uses (domestic and productive) across wealth groups in a transect of livelihood zones from highland to lowland, with a focus on assessing how differential access to water affects livelihoods security and potential for resilience in different livelihood zones.
2. Drawing on groundwater availability mapping undertaken by BGS², assess how the groundwater resource base currently affects the opportunities for household water security in each livelihood zone, and how the resource base might affect opportunities for water-based adaptation measures in the future.
3. Assess the likely impacts of climate change-related geophysical shocks and hazards (e.g. increased incidence and intensity of drought, or higher intensity of rainfall) on household access to water and on livelihood security – in order to identify the most vulnerable groups and geographic areas.
4. Assess the likely impacts of climate change adaptation schemes on different households in each livelihood zone.

METHODOLOGY

Methodological components of the baseline data collection include:

1. *Livelihood Zoning* – HWEA livelihood zoning delineates and characterises areas of broadly similar patterns of water availability, access, and use³.

HWEA baselines will be carried out in 3 livelihood zones:

² British Geological Survey.

³ Livelihood zones are areas where people share broadly the same patterns of production systems (e.g. agriculture, agro-pastoralism, etc), patterns of trade and exchange, and agro-ecological characteristics (e.g. climate, soils, topography, hydrogeology, etc). Livelihood zoning for Ethiopia has already been carried out by the organisations listed above (LIU, FEWS NET, SCUUK).

- a. **Wheat, Barley, & Potato (WBP) Livelihood Zone** – a highland mixed crop and livestock production zone, with relatively secure rainfall but moderate aquifer storage capacities (includes Goro Gutu and Tulo woredas).
 - b. **Sorghum, Maize, & Chat (SMC) Livelihood Zone** – a densely populated, low land holding, mixed crop and livestock production zone in the midlands, with potential for irrigation of cash crops such as chat, and comparably good market access (includes Derder, Doba, Goro Gutu, Meta, and Chiro woredas).
 - c. **Shinile Agro-Pastoral (SAP) Livelihood Zone** – a lowland agro-pastoral zone with high rainfall variability and evaporation rates and a comparably small groundwater resource base. It is characterised by low service provision, and clan and other conflicts block access to markets, farmland, and water access (includes Erer, Shinile, and Dambal woredas).
2. *Key informant interviews at woreda level* – on water availability, management structures, supply chains, and historical water-related hazards and response.
 3. *Key informant interviews at community/PA level* – 8 PAs per livelihood zone. Two PAs in each livelihood zone will be the ‘adaptation’ sites assessed in the CC and ID studies⁴, allowing for analysis of information from all studies.
 4. *Focus group interviews with wealth group representatives in each PA* – rigorous, semi-structured interviews with 4 wealth groups to obtain a detailed, quantified account of water access at household level.
 5. *Hydrogeology / water source site visits* – in each PA – to assess local water availability.

Groundwater availability mapping, developed by BGS at a national level, and expected to be completed for the livelihood zones noted above. It will contribute to identification of areas most vulnerable to drought, as well as identification of types of water-based interventions that are possible and appropriate for specific areas.

Scenario Analysis will take place alongside ID and CC teams. HWEA and HEA datasets will be used to project the likely impact of climate change and related

geophysical shocks on household access to water and on access to food and income – and thus household ability to survive and protect their livelihoods. Scenario analysis will also model the impact of adaptation schemes on household access to water using HWEA, ID, and CC data from the adaptation sites.

STUDY OUTPUTS AND LINKS TO ACTION

Outputs will include water economy baselines for each livelihood zone, modelling projections, and related written reports and recommendations. It is expected that the HWEA approach will be scaled up in a subsequent phase of RiPPLE’s long-term action research to provide a foundation for a water supply monitoring and response system at woreda level in RiPPLE affiliated woredas (e.g. Goro Gutu).

Capacity of woreda water officials built through their participation on data collection and analysis teams is expected to provide a strong foundation for continuation and use of the information. On a broader scale, the findings and recommendations resulting from the study are expected to inform government and agency planning and implementation on climate change policy, planning, and response, in particular as these are pursued through the National Adaptation Programme of Action (NAPA) for climate change in Ethiopia.

⁴ Income Diversification and Climate Change studies, under the Growth LARS.