

Advancing Water Futures and Solutions (WFaS) in East Africa:

Scaling out resilient water and agricultural systems (scaleWAYS)

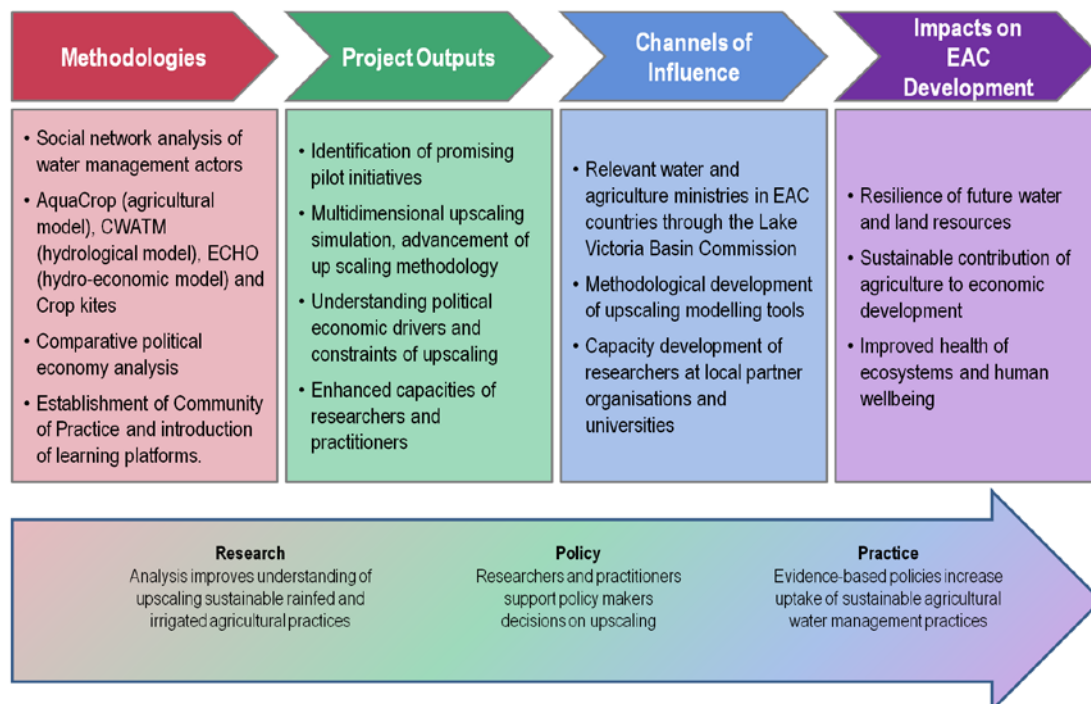
The research project scaleWAYS aims to contribute to resilience of land and water resources, improved health of ecosystems and human wellbeing in the extended Lake Victoria Basin¹ as these are threatened by strong population growth and effects of climate change projected for the coming decades.

The expected outcome is to have an improved understanding of up scaling of promising local and regional land and water management practices for sustainable intensification of rainfed and irrigated agriculture. Activities carried out over the course of the three-year implementation period are structured around the following output areas:

- **OP 1 Identification and scoping of pilot initiatives:** Promising pilot initiatives for resilient local and regional agricultural water management are identified and scoped in detail to determine up scaling potential in selected agro-ecological zones.
- **OP 2 Multi-dimensional up-scaling simulations:** A biophysical and economic model for up scaling the sustainable intensification of selected rainfed and irrigated agricultural practices is produced/adapted and tested in two agro-ecological settings.
- **OP 3 Political economy analysis and stakeholder engagement:** Political economy aspects, social and gender dimensions relevant to the up scaling of selected pilot initiatives in selected agro-ecological settings are analysed and level of understanding is documented.
- **OP 4 Capacity development:** Practitioners and researchers from regional and local institutions from academia, government, NGOs and business advance their capacities in research skills within scope of the research project.

In moving from the proposed research activities to impacts on practices in the EAC, the project follows different channels initiating from the four primary project activity areas of scaleWAYS.

Theory of Change:



¹ The extended Lake Victoria Basin is the hydrological basin defined by outflow of the river Nile from Uganda into South Sudan at the river gauge station in Laropi / Uganda. It includes the areas of the Lake Victoria Basin defined by the outflow of the Nile from the Lake Victoria in Jinja including all Nile watersheds of Uganda and some minor areas of DRC and South Sudan.

After carrying out a detailed research design, researchers will conduct a social network analysis of the actors involved in agricultural water management in the study area, mapping the relevant actors, policies, and projects, as well as their relation to one another. Through this analysis, the researchers will identify projects and practices, which show potential to contribute to sustainable agriculture intensification at a larger scale which lead to resilient solutions in the context of changing climate and likely socio-economic transformations population will be exposed to (OP1). Following the identification of pilots, two types of analysis will be carried out on the chosen pilots, one developing new tools for modelling the biophysical and economic implications of upscaling (OP2), and the other investigating the social context in which the pilot operates, identifying potential incentives, obstacles, and trade-offs of upscaling in terms of political economy, gender, inequality, and conflict (OP3).

Critical to accomplishing the long-term impacts set out in this project, is the final component, the establishment of a Community of Practice (OP4). Researchers and practitioners from the region are involved at each stage of the project, both in data collection and analysis as well as through targeted trainings. Through this collaboration, the project will strengthen the local capacity in the methods used in the project for assessing the impact of pilot initiatives. It is in this capacity that the project outputs can lead to changes in policy and practice in the region. Equipped with comprehensive data as well as capacity for further assessment, researchers and practitioners will have the tools to support policy-makers in decisions on up scaling resilient and sustainable agricultural intensification initiatives in the region. Most notably, the partnership with the Lake Victoria Basin Commission provides an accessible channel between researchers on the project and relevant water and agriculture ministries in each of the EAC countries.

Lastly, the analysis of the social, political, and economic contexts in which pilots are adopted and expanded will play an essential role in ensuring that policy impacts lead to changes in practices in the region. Because of the social component of the analysis, the evidence provided to policy makers for up-scaling decisions proactively addresses obstacles to policies transitioning into the intended regional impacts of the research project, namely: resilience of land and water resources, sustainable contributions of agriculture to economic development goals, and improved health of ecosystems and human wellbeing in the Lake Victoria Basin and East African Community as a whole.

Expected outcome and impact of scaleWays:

The proposed outcome of the project is to have an improved understanding of up scaling of local and regional land and water management practices for sustainable intensification of rainfed and irrigated agriculture. About 200 scientists and practitioners working in the EAC in academic, governmental, business or civil society organisations will benefit. Benefits will be realized through both directly engaging in research or participating in capacity development events organised through a Community of Practice that will be established through this project.

The project contributes to the resilience of future water and land resources, ecosystems and wellbeing of the population living in the East African community and in particular the 45 million people residing within the Lake Victoria basin.

The partnership:

The work will be undertaken as a partnership between the International Institute for Applied Systems Analysis (IIASA) based in Austria together with the Lake Victoria Basin Commission (LVBC) as the local regional implementing partner. LVBC will involve all its member countries in the research project. The International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) will contribute as an international research partner. Local universities and centres of excellence will join to carry out specific research activities.

Project duration and funding:

scaleWays is expected to be implemented over a 3 years' period and started on 1.12.2018. The Austrian Development Agency agreed to provide a grant of up to EUR 1,440,900 for the total estimated project costs of EUR 1,601,000. The remaining funding comes from own contributions from IIASA, LVBC and ICRISAT.

Web-site:

http://www.iiasa.ac.at/web/home/research/researchPrograms/water/WFaS_East_Africa.html