

Advancing Sustainable Agricultural Value Chains through Strengthening Transdisciplinary Skills and Cooperation in East African Doctoral Education

One of the key objectives of ADVALUE is to modernise doctoral programs by introducing innovative courses on transdisciplinary research methods and value chain approaches. Online and offline pilot trainings introduce key subtopics within each module and focus on hands-on learning, active student engagement and fostering collaboration.

Pilot Trainings of Module 2, 3 and 4

From December 2025 to February 2026 the offline pilot trainings of module 2, 3 and 4 were successfully conducted. Students from Makerere University (MAK), Uganda Christian University (UCU), University of Nairobi (UoN) and Pwani University (PU) attended.

Module 2 - Transdisciplinary Research

From December 8th to 12th, 2025, Pwani University hosted the second module of the ADVALUE project, focusing on Transdisciplinary Research methodologies. Transdisciplinary research aims to solve problematic situations in agricultural and food systems. It therefore promotes the integration of knowledge and the joint generation of knowledge among the professional groups involved in these situations (farmers, environmentalists, etc.) and representatives of various disciplines. To support these processes, participants learned how to conduct collaborative research, including methods for capturing stakeholders' knowledge and fostering mutual learning. Networks among peers across East African institutions created communities of practice extending beyond the training week.

"The skills and knowledge acquired in transdisciplinary research will significantly influence my future research and professional work. I particularly appreciated the importance of applying the principles and elements of transdisciplinary research to both research and development initiatives." - PhD student of UCU

"My stay resulted in enhanced technical knowledge, practical skills and a deeper understanding of a transdisciplinary research approach. I gained new insights into qualitative research and collaborative approaches that are directly relevant to my academic and professional work. The training strengthened my analytical, research and teamwork capacities and expanded my professional network." - PhD student of MAK

The online pilot trainings were conducted internally from Sept 2026 to Feb 2026. With all the experiences, feedbacks and discussion outcomes, the module content is now updated and finalized.



Photos: Peter Gumi



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Module 3 - Rangeland Management

The sensitive arid and semi-arid habitats are of great importance in East Africa. Module 3 aims to promote a scientifically informed approach to the management of these areas. This includes considering and involving the relevant stakeholders and the expertise of various disciplines.

Online Pilot Training

Rangelands cover about 54% of the global land surface, about 43% of Africa's, and 62% Sub-Saharan Africa's land area.

The online trainings started with a kick-off week from 25-29 August 2025 and introductory topics about the extent and distribution of rangeland, biophysical and ecological, classification of rangelands, theoretical approaches to rangeland ecology and vegetation dynamics, and rangelands as socio-ecological systems. Participants at the public lectures, that followed monthly until December, e.g. from Tanzania, showed the international relevance of the topics.

Face-to-face workshop and field days

The pilot week in and around Nairobi was used to demonstrate specific topics. One workshop session focused on combining ICT tools with participatory approaches for rangeland assessment and disease detection and monitoring. Inputs in the seminar hotel provided background on rangeland assessment. During a field visit to the ILRI Ranch in Athi Kapiti, Machakos, the participants further learned to conduct vegetation and soil sampling. The laboratory analysis was finally demonstrated at UoN upper Kabete Campus. Meeting an innovative pastoralist who rears cattle and sheep allowed the group to discuss various topics, including diversification, e.g. into tourism.

"The built skills, networks and memories will propell me to motivate others to join in the conservation and management of our rangelands. The knowledge gained will also help me as I work on my PHD and extensive research in the rangelands in the future."

- PhD student of PU



Photos: Angelika Thomas

"The training opened a new world in relation to cattle nutrition, pasture/fodder analysis, GIS and remote sensing. The rangeland module is a perfect practical application of trans-disciplinary research and participatory and epidemiological approaches in one health."

- student of UCU

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Module 4 - Sustainable Agricultural Value Chains

Uganda Christian University hosted the pilot training of module 4 from 9th to 13th February 2026. The training commenced on Monday at the Principal's Hall, UCU Main Campus in Mukono, designed to build capacity in sustainable agriculture, with a focus on strengthening value chain systems, improving market linkages, and enhancing resilience among farming communities. The programme featured interactive sessions, case studies, and practical stakeholder discussions to deepen the understanding of sustainable production, processing, and marketing within agricultural systems in East Africa. The training informed future curriculum development, joint research partnerships, and community-based agricultural initiatives across the participating institutions.

"The balance between theoretical sessions, practical case studies, and field excursions enhanced learning outcomes. Interaction with international partners strengthened academic collaboration. The inclusion of stakeholder engagement and field visits significantly enriched practical understanding. Future trainings could allocate additional time for group research development and deeper methodological application exercises."

- PhD student of PU

"The key learning outcomes included enhanced knowledge of value chain concepts, better skills in identifying constraints and opportunities within the chain, and improved capacity to apply practical strategies for strengthening agricultural enterprises." - PhD student of UoN

The online pilot trainings were conducted between March and April 2026 in public and internal sessions.



Photos: UCU media

