

# Strengthening Human Resource Capacity to Foster Agricultural and Rural Innovation in Eastern Africa



Documentation of field experiences for E-content development.

## PROJECT IMPLEMENTATION PERIOD

September 2013 – September 2016

## CONSORTIUM

- Makerere University, Uganda
- Sokoine University of Agriculture, Tanzania
- Egerton University, Kenya
- Agreenium, France
- Wageningen University, The Netherlands
- University of Copenhagen, Denmark
- RUFORUM, Uganda

## Associated partners:

- Inter-University Council of East Africa, Uganda
- Association for Strengthening Agricultural Research in Eastern and Central Africa, Uganda

## PROJECT CONTACT

Paul Kibwika  
Makerere University  
Department of Extension and Innovation Studies,  
College of Agricultural and Environmental Science,  
P.O Box 7062  
Kampala  
Uganda  
Tel: +256 712 566952  
E-mail: pkibwika@caes.mak.ac.ug

## PROJECT WEBSITE

[www.ariphdprogram.org](http://www.ariphdprogram.org)

## SUMMARY OF RESULTS

The project enhanced the quality of training of Agricultural and Rural Innovation (ARI, a programme set up through a previous EDULINK project) and AgTrain PhD programmes through student and staff exchange between African and European universities, and converting selected modules for online delivery. 19 academic, 6 administrative staff and 79 students participated in the joint delivery of 10 modules with 51 and 69 student and staff exchanges. The 10 modules were updated and 6 of them converted and tested for online delivery. 3 e-learning laboratories were equipped, and 19 academic and 6 administrative staff trained to facilitate online learning. Additionally, 3 national stakeholder platforms were established to align ARI with development needs.

## BACKGROUND

Innovations in agriculture are resulting from the co-ordinated actions of multiple stakeholders including farmers, researchers, private sector and civil society organisations.

East African countries are transforming their agricultural systems to promote innovations that enhance agricultural growth and reduce poverty. However, the innovation systems approach is a relatively new field that requires the development of competent human resources to generate the knowledge to design and effectively implement agricultural development programmes. Universities need to develop capacities to produce the desired human resources.

To address this challenge, a regional PhD programme in Agricultural and Rural Innovation (ARI) has been implemented. The programme seeks to reduce the cost of student and staff mobility through online delivery of modules and establishing national stakeholder platforms for continuous guidance.

## METHODOLOGY

The PhD students from the 3 African universities converged at Makerere University for joint course work. A team of instructors comprising of representatives from each African university and one European university taught (and reviewed) each module to allow exchange of knowledge and experiences. European instructors provided technical expertise in developing and testing online versions of ARI modules. National stakeholder platforms in African countries

convened each year to guide alignment of ARI with development needs through the following actions:

- **Development of mobility implementation plan:** A master plan developed to map schedules for the mobility of students and staff for each cohort.
- **Joint implementation of ARI programme:** Recruitment of students and logistical requirements for necessary adjustments in module delivery.
- **Review and update of the ARI modules:** Instructors integrated feedback in reviewing modules, taking into account course outline, content and mode of delivery.
- **Training of staff in e-content development and online delivery:** The development of e-content requires new preparation and delivery skills.
- **Peer review and uploading of e-content:** Modules subjected to peer review by persons familiar with online learning, tested and uploaded.
- **Procurement and equipping of student computer laboratory:** Each of the 3 African universities was provided with IT equipment to ensure access to e-learning.
- **Orientation of students in online learning:** Prepare students to effectively use computer-aided learning. University of Copenhagen has extensive experience in creating online educational fora, which effectively overcome initial hesitation and lack of openness in the sharing of ideas.
- **Identification of potential employers for national platforms:** Intended to articulate the capacity and research needs of the rural development agencies.

## RESULTS

### → Outputs

#### Capacity building

- 10 modules jointly implemented and updated.
- 79 students of ARI and AgTrain participated in the joint modules delivery.
- 66 staff participated in joint module delivery.
- 51 student and 69 staff mobilities implemented.
- 6 online modules developed and tested.
- 19 academic and 6 administrative staff oriented in online module delivery.
- 3 national stakeholder platforms established.

- 5 PhD students graduated with ARI PhD in January 2018 at Makerere University.

#### Facilities

- 3 e-learning laboratories equipped.

### ↑ Outcomes

- Students are able to gain perspectives in development research through community and stakeholder engagement.
- Establishment of e-learning resources enables cost-effective collaborative teaching within ARI programme partner universities.
- Stakeholders challenge the universities with critical areas of research and are willing to fund research.

### 🎯 Impacts

#### Usage

- Teams of instructors jointly teach modules to provide different perspectives to the content and its application. This approach to teaching is now a best practice within the African partner universities.

The East African Community is in the process of developing policies for harmonisation of education in the region and the ARI programme provides a good model for harmonisation of curricula and facilitation of credit transfer.

with enhanced capabilities in constructing academic theories around development issues, framing research and generate knowledge for problem solving and facilitate critical thinking will attract the best international students from across the African continent.

#### Policy implications

- The foreseen policy implication is in developing policies and guidelines for credit transfer among East African Universities.

#### Sustainability

- The capacity of the partner universities to implement a competitive PhD program



Innovation in agronomic practices.



Community feedback meetings with ARI and Agtrain students.



ARI and Agtrain PhD students field orientation preparations.

## TESTIMONIAL



**Dr. Maurice O. Udoto**  
Senior Lecturer  
Department of  
Agricultural Education  
and Extension,  
Egerton University,  
Njoro, Kenya

“The ARI programme is a well-conceived project for training top-level managers in agricultural and rural development in Africa. The innovation systems approach, emphasising complex process-based systems is appropriate given that the sector’s growth and develop-

ment is influenced by complex interactions among public, private, and civil society actors, while knowledge flows within the system are conditioned by a variety of rapidly changing institutions.”

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