

## MAINBIOSYS-Mainstreaming the Biofarming System in Ethiopian and Ugandan Higher Education Institutions

The project's goal is to facilitate the transfer of knowledge and research methodology throughout the joint development of demonstration actions and a research network among ACP and EU HEIs to enhance the partners' capacity to train competent and professional experts in sustainable agriculture. MAINBIOSYS aims to achieve results with a need based approach in strengthening human resources in developing collaborative research, technology transfer and knowledge exchanges on best practices and procedures in the sustainable agriculture sector.

**Contract**  
FED/2013/320-189

**Co-ordinator**  
Università degli Studi del Molise

**Partners**  
University of Gulu  
Addis Ababa University  
Hawassa University

**Associates**  
Bioeconomy Africa  
African Bioeconomy Capacity Development Institute

**Project duration**  
36 months

**EU grant**  
EUR 475,968.92

**ACP regions and countries involved**  
Ethiopia (Addis Ababa, Southern Nations, Nationalities and Peoples' Regional States)  
Uganda (Gulu District)

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### Challenge

In Ethiopia and Uganda, million people, affected by the drought, still need emergency food assistance. Poverty, although showing a decreasing trend, still represents a dramatic concern affecting almost the 50% of the population. Agriculture plays a major role as the most important economic sector. Such a situation determines a direct negative impact on the capacity of agriculture to satisfy food consumption demand.

In this framework, environmental degradation further negatively affects living conditions and agriculture performances. Thus, the achievement of sustainable income growth to reduce vulnerability in rural areas has to proceed by addressing food security through productive safety programmes as well as by promoting the adoption of sustainable productive approaches.

### Focus

The establishment of a BIOFARMING SYSTEM (BS), mainly promoted by BEA based in Addis Ababa, could represent a key factor to improve livelihoods and enhance sustainability of eco-social systems in urban and rural areas of ACP countries. The Biofarming approach applied in Ethiopia has as a basis three pillars of sustainability (ecological, social and economic) The aim of which is to develop sustainable human settlements and self-maintained agricultural systems modelled from natural ecosystems and merging various approaches like permaculture, organic farming and conservation agriculture. Biofarming is a science and evidence-based approach to sustainable livelihoods built upon indigenous knowledge and skills, continuously integrated and implemented with recent scientific advances and relies on holistic restorative and environmental friendly methods to improve ecosystem service provision.

### Rationale

Model farm facilities (BIOFARM) are integrated elements of the Biofarming approach and serve for demonstration, training and research purposes. BS is introduced to farmers through short intensive periods of training, based on an analysis of local agro-ecological constraints and different types of sustainable natural resource management practices introduced into farming systems. The establishment of BS is of particular interest in areas where resources are scarce. Diversification of production activities are required that ensure positive impacts on the ecosystem. HEIs should play a fundamental role in introducing innovative technologies, however partner HEIs still face relevant challenges: qualified academic staff shortage, limited capacity to provide postgraduate courses, limited chances to share experiences internationally, insufficient resources to train skilled experts and limited from reduced research and innovation capacities.



View of a biofarm promoted by BEA in Addis Ababa (Ethiopia)

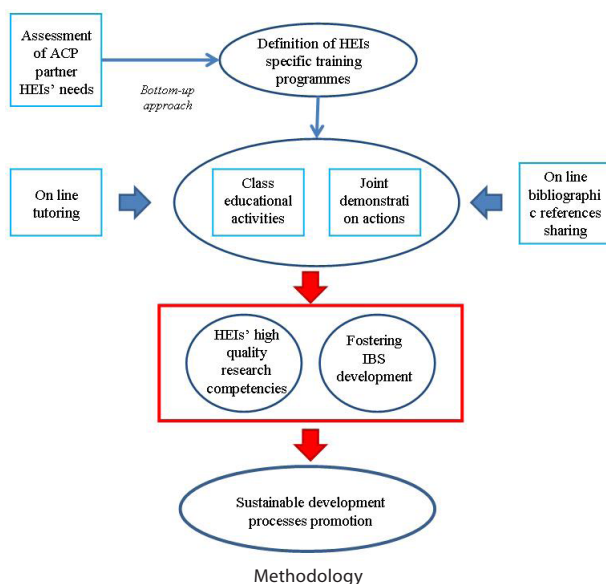


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### Method



### Programme theme(s)

Agriculture and food security

### Sector

Higher education, Education policy and administrative management, Educational research, Agricultural development, Agricultural education/training, Rural development, Food aid/Food security programmes.

### Keywords

Biofarm, Sustainable development, Integrated Bioeconomy System (IBS)

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University of Molise has competences in many components of Biofarming that will be used for the realisation of the action. MAINBIOSYS aims to provide partner HEIs with the necessary competences to efficiently apply advanced research methodologies and promote development processes.



Mainbiosys logo

The problems MAINBIOSYS aims to address are two-fold:

- Qualified academic staff shortage and limited capacity to produce innovative and advanced applied research in natural sciences and agricultural issues. MAINBIOSYS plans to transfer research methodology capacities to increase the quality of applied research on BS issues and to enhance capacity to train competent and professional experts in sustainable agriculture.
- Complying with both national development strategies and EU sustainable development policies, environment friendly production practices have to be enhanced in order to promote sustainable growth and improve socio-economic conditions.



Visit of ACP staff members to an Italian organic farm in April, 2014

### Results

MAINBIOSYS expected results are: reduce the competencies gap that limits HEIs capacity to act as sustainable growth engines; strengthen human resources capacities in developing collaborative research, technology transfer and knowledge exchanges in sustainable agriculture sector; increase inter-institutional networking cooperation and collaboration between ACP and EU HEIs and between ACP HEIs and local stakeholders (rural communities, policy makers and agricultural extension services, biofarming actors etc); improve mobility of post-graduate students and teaching staff; higher quality education, relevant to the needs of labour market and consistent with the socio-economic priorities of the ACP Countries.

MAINBIOSYS products and services directly produced and delivered are: 3 questionnaires and 3 baseline reports on research needs assessment; 1 project planning meeting; 1 training plan; 10 ACP staff members visited UNIMOL; a Biofarming Training School in Ethiopia; ad-hoc training activities in Ethiopia and Uganda; 6 demonstration actions in Ethiopia and Uganda; on line tutoring and bibliographic references system; 9 postgraduate students from ACP trained at UNIMOL; 100 staff member from ACP trained; communication and visibility plan; project logo; project website and web platform; 3 dissemination conferences; 1.500 brochures, 100 posters, 1.500 leaflets; 250 "Biofarming guides".