

Educating the next generation of professionals in the agrifood system

NEXTFOOD will contribute to a transition to more learner-centric, participatory, action-based and action-oriented education and learning in agrifood systems, which are becoming increasingly complex and require an increasing range of “hard” and “soft” skills. The objectives are to

- (O1) identify the skills needed for a transition to more sustainable farming and food systems,
- (O2) develop and test relevant curricula and training methods,
- (O3) assess existing policy instruments for the training and education sector,
- (O4) develop tools for evaluating quality of the training and education sector,
- (O5) develop a platform for knowledge sharing.

NEXTFOOD will employ case-based action research to

- (I) develop relevant and effective education and training programmes for a transition to more sustainable agrifood systems,
- (II) generate new knowledge needed for similar achievements beyond the specific case. The

case development (I) will rest on a cyclic, iterative, participatory process consisting of

- (1) observation and description of the current situation in each case,
- (2) visioning of a desired future state,
- (3) analysis to identify key issues, solutions, supporting and hindering forces etc.,
- (4) elaboration and discussion of action plans,
- (5) implementation of plans,
- (6) iteration of steps (1–5) in a cyclical manner throughout the course of the project.

Simultaneously, *research (II)* will be done on qualitative and quantitative data generated during the case development process and analysed to answer research questions that are relevant beyond the specific case. This will produce new knowledge needed to drive the transition to the learning strategies required to educate and train professionals that can meet the very complex future demands in the agrifood sector.

The main research questions of NEXTFOOD are:

1. How can participatory and action-oriented learning strategies focusing on competences required to foster more sustainable agrifood systems, be designed and implemented?
2. What are supporting and hindering forces for such alternatives to establish and develop successfully?

Case name: Action learning for preparing operators of Sustainable Agriculture contact persons at CIHEAM: Lamberto Lamberti, lamberti@iamb.it and Virginia Belsanti, belsanti@iamb.it

Background

CIHEAM is a regional Intergovernmental Organization representing 13 countries (Albania, Morocco, Algeria, Tunisia, Egypt, Lebanon, Malta, Greece, Italy, France, Spain, Portugal, Turkey) that works for the development of sustainable agriculture in the Mediterranean. Education is a core part of its activities and every year a community of around 200 students attend master courses in the sector of agriculture and rural development in the four CIHEAM Institutes (Montpellier, Bari, Chania and Zaragoza). Each institute is specialised in different domains that result in a varied Master offer (organic agriculture, integrated pest management, irrigation and water resource management, project and public policies engineering, food value chains and agri-logistics, agricultural management and territories, economy of agricultural, environment and food development, economics, management and rural territory development, natural resource management, food security, safety and nutrition, aquaculture, plant and animal breeding). Students come from different countries in the northern, southern and eastern shores of the Mediterranean basin.

Brief description of the case

CIHEAM Bari will test the methodology as follows: the master course in Organic Agriculture will be involved with all its 1st year students. They have been divided into 3 working groups (5/6 students each) that will be guided in the accomplishment of 3 small course projects, whose focus comes from real needs identified in the local territory. **The main aim is to contribute to the definition of strategies to promote organic agriculture and sustainable development.** The working groups are guided, coached and engaged through the support of the NEXTFood case-study team, 2 tutors and the active interaction with a local institutional stakeholder (the Regional Natural Park of the Coastal Dunes), also considered as “learning facilitators”. Students will work in a multi-disciplinary and inter-sectoral way through the direct interaction with the main active stakeholder, who, together with them, will identify some local initiatives and the related actors, on which each working group will design its final project. The course projects will be implemented through several phases, based on observation, dialogue and reflection, leading the students to experience an action-based and oriented learning.

This “methodology module” will envisage 4 phases:

1. **Connecting:** during this phase, groups will be introduced to the methodology and how this can be used to carry out a multi-disciplinary and collaborative course project. They will also get familiar with the main local stakeholder and the local context where activities will be carried out.
2. **Planning:** in this phase, student groups will design their project protocol and plans of action, identifying and practicing a set of tools for data and information collection. Tools and methodologies will be provided by the learning facilitators. Students will select the best suitable

tools for their activities to design their protocols.

3. Acting and observing: student's groups will implement their project protocols, undertaking individual and collective observation of the targeted context.

4. Restitution and Sharing: groups will discuss the results of their findings with key stakeholders for checking, adjusting and sharing results. This phase will contribute to the acquisition of an important skill, the visioning, where the creativity for identifying innovative ways to approach problems and challenges will be developed in collaboration with all the stakeholders involved in the process.

Classroom activities: The course project activities will be supported by classroom sessions (30 hours) during which key topics for implementation will be presented and discussed, and/or group activities and exercises proposed.

Practical days: 10\12 days, for each group, will be dedicated to approach real-life contexts, visiting stakeholders, setting up meetings, collecting information and observing, surveying fields and other key places, etc. This will complement the activities of the 4 phases.

Workshops: 3 workshops, involving all the groups, stakeholders and local actors and the learning facilitators, will be organized. The first workshop at the beginning of the master course, one for adjusting and the third workshop for sharing all 3 project results.

How will the case contribute to achievement of the NEXTFOOD objectives by action research as the main strategy?

The learning experience of the groups will be matched with real-life needs and demands coming from a range of local actors all addressing the main topic of interest. The “field experience” is the place where skills will be tested and developed, knowledge will be co-created by the iterative exchange among different stakeholders. In the groups the experience and knowledge acquired will be discussed and elaborated under multidisciplinary angles and the output will be the result of this process.

The present case study will imply a combination of hard and soft skills along every step of the process. It will be possible to identify what skills are needed for a beneficial interaction with stakeholders, to collect information, to co-create knowledge and produce a participatory output whose results can provide evidence to support the transition to action learning in sustainable agrifood systems.

By the monitoring of all stages of the case study, new knowledge will be certainly produced to allow replication or adaptation in different contexts and it will offer reflection material for any future inclusion of this type of experience in relevant curricula in different training paths (professional, phd, capacity building, master).

How will the case study provide evidence to answer the NEXTFOOD research questions?

NEXTFOOD research questions:

- How can education and training focus on participatory, experiential and action-oriented learning in agrifood systems?
- What are supporting and hindering forces for achieving such alternatives?

The case study of CIHEAM will be based on a participatory methodology combined with action learning and field experience. We have already successfully tested a similar methodology in the past years, dedicating a full 8-month period to a course in sustainable agriculture where the methodology was based on participation and “learning by doing”. The case study will use a participatory methodology during the theory delivering moments, as the lecturer will feed main topics that will be developed by interaction among learners, group research/discussion and field experience. The assignment becomes the core around which action learning will take place, as it will drive the activities towards real-life contexts, it will require knowledge development and stakeholder’s interaction.

In this process we have already reflected of some supporting and hindering forces. The supporting factors are identified with the researchers, lecturers and tutors willing to test this methodology, the students attracted by a new approach to research and knowledge creation.

Hindering factors can be either internal and external. Internally, there may be some institutional resistance to change established methodologies of entire training packages, implying additional costs and a more demanding organisation of activities.

Externally, the main hindering factor is the involvement of stakeholders and how to produce a beneficial exchange to their end. Also, how to ensure their involvement in the activities on a regular basis.

When do you plan to run the first cycle (starting and ending dates) of the educational activities (courses, seminars etc.)?

Duration

The training will run from November to May. A potential agenda is proposed below:

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	deliverables
Stakeholder selection									
Students selection & mobilization									
Connecting		1 Meeting at IAMB with stakeholders 2 Visits to stakeholder environment 12 classroom hours							Active Actor profiles and Project objectives
Planning			Preparation of investigation tools and work plan 1 field exercise 10 classroom hours						Project Action protocol
Acting and observing				3 visits 4 classroom hours					Individual reports
Restitution and reporting						1 day Workshop with stakeholders and other actors 4 classroom hours			Group report

What is the planned (expected) number of learners (students, farmers, etc.)?

We are planning to start with 15, coming from the Organic Agriculture Master course held at CIHEAM Bari. Students will be divided into 3 groups and each group will have 2 coaches. A main stakeholder is fully engaged for the territorial networking and for sharing the knowledge and needs of the local context and about 10-15 local actors from the agro-food business will be involved.

What is the level of the course(s)? (BSc, MSc, other)

It will be at Master level, first year students.

Who will be the teachers/learning facilitators?

Considering the way we are structuring our case study, the lecturers of the main master course will be aware of the alternative assignment preparation of a small group of students. They will still contribute with their modules. During the specific time devoted to the case study, depending on the particular stage of the case development, we will have lecturers (in-house or visiting professors) for a theoretical background and topic identification for the assignment, CIHEAM researchers as tutors/facilitators. Stakeholders involved will be learning facilitators as well (private sector/public/civil society).

Stakeholders involved: cooperation project experts, research project experts, local actors (farmers, agribusiness operators, local institutions, municipalities, associations, cooperatives, local action groups, etc)

A description of the 'learning arenas':

Where will the activities take place, what will be the processes to enable co-learning between teachers, learners (students, farmers, etc.) and research persons in society (farmers and others)?

The main activities will take place at CIHEAM Bari, during the institutional master courses implementation. The learners will attend the master courses and acquire relevant knowledge during the normal course development. Concerning their participation in the “case study”, the learning arenas will be dedicated seminars for acquiring specific knowledge on the cross-cutting thematic area; group work for co-creation of knowledge, discussion of tools and methods to proceed with the assignment; workshops for identification of stories at the centre of the assignment; field visits; workshops with stakeholders involved; ICT technologies to facilitate the experience sharing. All the outcomes of the CoP will be made available on the Agorà, a multi-functional web platform where knowledge exchange is supported and the civil society can be involved in the knowledge co- creation process.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 771738
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