CIHEAM BARI

Master Programme in
Sustainable Development and Agroecosystem Resilience (SARe)
Academic Year 2026-2027

DESCRIPTION

The Master programme in 'Sustainable Development and Agroecosystem Resilience (SARe)' provides an innovative educational path that aims at preparing professionals to tackle the complex challenges to sustain food production in rural areas. The course focuses on farming and food systems evolution, identifying 1) the agroecosystem as the unit for action, a complex system with economic, social, and ecological components; 2) the local community as the main stakeholder relying on the agroecosystem functions and aiming to conserve and improve its ability to resist and respond to changes.

Agroecosystems are studied as agricultural landscape systems delivering important services to societies, and that evolve in relation to agri-food policies and people behaviors. Solutions are proposed for their sustainable management with a focus on biodiversity, water, soil resources, and inputs, also in response to challenges related to climate changes.

With a view to agroecological transition, the study programme gives attention to ways to promote stakeholders' participation and empowerment in agroecosystem planning and management; to develop knowledge and innovation systems in rural areas; to establish agri-food networks driven by green and ethical principles. The course presents methodologies and tools for analysing agroecosystems and designing projects for sustainable development of agri-food sector and communities.

A consistent part of the programme is devoted to students' projects.
At the end of the programme students will master the system thinking required to understand, assess, and promote agroecosystem resilience, and they will be able to:

- ❖ comprehend and analyse the complexity of agroecosystems, their relations with food systems and people's behaviors, the nature of their development challenges;
- ❖ design and drive community development processes according to agroecological principles to build up resilience against bio physical and socio-economic stresses;
- ❖ analyze and promote multi-actors' networks, and agricultural knowledge and innovation systems that support sustainable land management processes, green economy development and social inclusion;
- ❖ support community farms towards greater competitiveness and socio-economic sustainability in the agri-food system.
- ❖ implement action-research and learning approaches through participation, dialogue and vision building processes; use a range of tools for quantitative and qualitative research in rural areas.

ORGANIZATION

First Year: 60 ECTS
Duration: October 2026 – October 2027
Diploma: Master of CIHEAM Bari

CANDIDATES' PROFILE

The course is addressed to candidates who have motivations in working in research or services domains, as well as in development programs, oriented to the empowerment of rural communities in sustainable agroecosystem management and who wish to be actively engaged in interdisciplinary and multisectoral challenges.

Requirements:
Candidates shall hold university degrees related to agricultural, environmental, social, and economic sciences, with diplomas awarding at least 180 ECTS (three-year bachelor's degree). Other study titles and working experience are considered as an added value for selection. Applicants shall have a good knowledge of spoken and written English and easy access to computer facilities.

ADMISSION

Selection of students is based on:
1. Screening of application-supporting documents
2. Online interviews

Applications: through the CIHEAM Bari platform
https://www.iamb.it/education/application/

Deadline: 31 May 2026

COSTS

Registration fee: 200.00 €
Tuition fee: 500.00€/month (travel, accommodation and insurance expenses not included).

SCHOLARSHIPS

CIHEAM Bari grants full or partial scholarships to candidates according to a ranking list. Priority is given to students coming from CIHEAM Member countries and other African, Mediterranean. Western-Balkan and Middle Eastern Countries

LANGUAGE OF INSCTRUCTION: English

For further details about SARe:
www.iamb.it/education/masters/sare

CSQA IQNET

Master programme

Unit I – Sustainability and resilience in agri-food systems (delivered in distance learning): it explores the complexity of agri-food systems by analyzing socio-economic and ecological drivers, interactions, and transformation pathways towards agroecological transition. Framed within the Sustainable Development Goals (SDGs), it examines the multi-dimensional nature of sustainability challenges across agriculture and food sectors. A specific focus is placed on understanding how resilience can drive agri-food system development, innovation, and adaptive capacity.

Unit II –Land Management in agriculture: this unit examines the importance of sustainable soil and water use in agriculture, addressing strategies for their conservation, restoration, and efficient management. It analyses land management practices in the context of climate change and natural resource degradation, including soil erosion, desertification, and water scarcity. Linkages between rainfall variability, soil properties, land use planning, and agricultural landscapes are explored.

Unit III - Agroecology: agroecology is presented as an alternative approach to farming, viewing agroecosystems as integrated units that deliver essential ecosystem services. It introduces core agroecological principles and practices, highlighting biodiversity management and ecological processes as foundations of sustainable production. Students will explore tools to assess agroecological transition pathways at the farm level.

Unit IV - Sustainability assessment of agricultural systems: the unit approaches frameworks for assessing the sustainability of agricultural processes, giving emphasis to economic, environmental and social dimensions. Focusing on frameworks such as SAFA and Life Cycle Assessment (LCA), it guides students in selecting appropriate indicators and metrics to evaluate system performance and trade-offs. Emphasis is placed on data collection protocols, analytical tools, and interpretation of results.

Unit V - Remote Sensing and Geospatial analysis: it presents how satellite imagery, drones, and GIS tools can be used in monitoring agricultural systems, highlighting applications for land degradation, climate change and crop performance analysis. Practical examples will demonstrate how geospatial data supports decision-making for resilient and sustainable agriculture.

Unit VI – Territorial development and local food networks: the module presents territorial approaches for transitioning to farming systems that promote local development and stakeholders' participation, while preserving the qualities of agroecosystems. The approaches include rural development policies that promote territorialities and the kind of stakeholders' networks, like food value chain, farmers' cooperatives, environmental or social associations, that contribute to agroecological transition and rural community resilience. The module also introduces methodologies for network analysis and market promotion.

Unit VII – Farming System Development: this unit introduces the farming systems perspective, viewing agriculture within a territorial context where communities of farmers face similar challenges and opportunities requiring coordinated solutions. It explores agricultural and knowledge innovation systems, as well as food value chains, as key drivers of rural and agri-food development. Particular attention is given to the role of business development services and to farmers' organizations, that support farmers' capacities, innovation uptake, and sustainable farming system transformation.

Unit VIII – Project design: this unit introduces the principles and methods of project design applied to rural development and agriculture. Students will learn how development projects originate from the identification and analysis of problems, local needs, and opportunities. The course emphasizes stakeholder analysis, participatory approaches, and rapid appraisal techniques to ensure inclusive and context-sensitive planning. Participants will also develop practical skills in preparing a project proposal, including the formulation of objectives, activities, and indicators through the Logical Framework Approach (LFA).

Unit IX – Methodologies for Rural appraisals: this unit provides a comprehensive introduction to qualitative research methods, focusing on both data collection and data analysis. Students will explore the distinctive characteristics of qualitative research and its value in investigating complex social phenomena. Key methods for data collection, including semi-structured interviews and focus groups, will be examined, highlighting their respective strengths, limitations, and complementary roles in capturing rich, contextual insights into participants' perspectives.

Unit X - Internship: the student, as final part of the master course, has to undertake an internship within an organization that work in the field of agriculture and rural development, such as Governmental departments, Universities or research centers, NGOs, private companies. In this framework, students must implement a practical activity, such as explorative research, rural survey, rapid assessment on specific challenges, relevant for the hosting organization. Finally, students will report the results of the internship in front of an international board, as final act of their Master education.