

Sustainability assessment of bioeconomic systems (32 hours, 4 CFU)

Lecturers: Emanuele Blasi & Clara Cicatiello

Objective: This course focuses on the application of the bioeconomic framework to assess the sustainability of economic systems. Following the Georgescu-Roegen stocks and flows approach, the interactions among firms, value chains, people and communities within a system generate “wellbeing” as an output. The course provides concepts to properly define bioeconomic systems, and methodological tools to appraise their level of sustainability and its drivers. Topics covered in this course include the natural capital assessment and the approach to ecosystems services’ evaluation, environmental economics solutions in international policy agenda, indicators for an appraisal of systems’ sustainability and the evaluation of projects and policies in agri-food systems.

Program: The program is organised in 6 lectures of 4 hours each, followed by a full-day workshop.

Class n.	Description	Lecturer
1 (4 h)	Economics, Bioeconomy and bioeconomics, meaning and definitions <ul style="list-style-type: none">▪ Economic growth and development, public goods and environmental economics▪ Georgescu-Roegen's and Daly's ecological economics and bioeconomics theory▪ Structure of bio-economic systems, stocks and flows, wellbeing	Blasi
2 (4 h)	Bioeconomics’ approach to analyse systems and policies <ul style="list-style-type: none">▪ Socio-ecological systems, natural capital and ecosystem services narrative▪ Policies, targets and instruments to manage sustainability▪ European agenda, from CAP to Green Deal	Blasi
3 (4 h)	Defining and measuring sustainability <ul style="list-style-type: none">▪ Concepts of environmental, social and economic sustainability▪ How to assess the sustainability of a system under a bioeconomic perspective▪ Sustainability evaluation and monitoring	Cicatiello
4 (4 h)	How to build a sustainability assessment of a system (1) <ul style="list-style-type: none">▪ Sustainability indicators and their application▪ Indicators of environmental sustainability▪ Examples and sources of data for environmental indicators	Cicatiello
5 (4 h)	How to build a sustainability assessment of a system (2) <ul style="list-style-type: none">▪ Indicators of social sustainability▪ Examples and sources of data for social indicators▪ Indicators of economic sustainability▪ Examples and sources of data for economic indicators	Cicatiello
6 (4 h)	Case studies of sustainability assessment in food systems <ul style="list-style-type: none">▪ Global sustainability▪ Environmental sustainability▪ Sustainability of food marketing channels▪ Food losses and waste	Cicatiello
7 (8 h)	Workshop and exam	Blasi & Cicatiello

Language:

English

Teaching method:

Lectures and group work

Room

Online lectures on the Zoom platform

Period:

March, April 2022

Exam:

Oral presentation