

Lecture in “Rural landscape analysis and planning”

1. Introduction to planning: Rural VS Urban landscapes; Rural multifunctionality; Landscape concept (European Landscape Convention and Landscape Character).
2. Landscape planning: Landscape planning in Italy; Planning according to FAO’s Land-Use Planning; Planning according to McNair; Landscape architecture; Ecological Planning; Regional planning; Overlay mapping; Suitability matrix; Layer cake model; Plannign according to Steiner.
3. Landscape analysis and representation: Photo analysis; GIS and planning; Scale of analysis; Corine Land Cover project; Photointerpretation; Scenario analysis; Landscape metrics; Fragmentation analysis; Temporal analysis and change detection approach.
4. Participatory planning: Pro VS Cons; Top-Down VS Bottom-Up approaches; Arnstein’s ladder of citizen participation; Task forces; Citizens committes; Technical advisory committes; Neighborhood planning council; Group dynamics; Nominal-group workshops; Focus group; Delphi; Policy Delphi.
5. Suitability Analysis: Land Capability Classification (LCC); Land Suitability Evaluation (LSE); Land Evaluation (LE); Site Assessmet (SA); LESA and modified LESA; Data harmonization; Bolean VS Fuzzy; Analytic Hierarchy Process (AHP).
6. Remote Sensing: Definitions of Remote Sensing (RS); RS history; Electromagnetic spectrum and radiometric variables; Electromagnetic spectrum and system plant/atmosphere/soil/water; Active- VS Passive-RS; Data availability; Spectral indices; Sentinel imagery download and processing (SNAP toolbox); Cloud computing platform (Google Earth Engine)

Main objectives

Understanding and representing the landscape aimed to perform a correct landscape planning is a mandatory knowledge for whom want to work with the landscape. The course is organized in two phases. The first one is devoted in acquiring basics knowledge on landscape, techniques to describe landscape dynamics, ecological planning and suitability analysis. The second one consists in lab exercises on change detection and suitability analysis.

Books

- Learning materials provided by the lecturer;
- Official documents provided by the lecturer and/or available online;
- Published papers;
- Individual researches;
- Steiner F – The living landscape: an ecological approach to landscape planning – McGraw-Hill (Chapters 1to6);
- Campbell & Wynne (2022) – Introduction to Remote Sensing – Guilford Press (Chapters 1to3);
- Jones & Vaughan (2010). Remote sensing of vegetation: principles, techniques and applications. Oxford University Press (Chapter 3)