Module 1: Geospatial Technologies

- 01.09.-10.09.2025 -

Content

Module 1 includes an introduction to processing environmental and remote sensing data via geospatial technologies. Different teaching/learning sequences should enable the participants to debate on key aspects of the current technical, methodological, and social development of geospatial technologies, while also qualifying them to debate and apply relevant technical terms and basic concepts of geoinformation processing on the basis of practical examples.

In 2025, we will start with an **Online Week** and with learning materials for self-paced learning on R Studio and concepts of remote sensing. All other **Lectures, Worksheets and Topics** contained in this module are used for learning in class in Frankfurt later.

Learning goals/outcomes

The participants…

- are able to describe and abstract spatial questions from geoinformation;
- know different spatial reference systems, namely, address-based, linear, topological georeferencing, projections, and coordinate systems;
- know the technical components and applications of GIS, remote sensing data systems, GPS, digital globes, as well as infrastructures for spatial information (hardware/ software);
- are able to describe different models of geodata and geoformats (such as raster, vector, TIN) and to describe geodata standards;
- are able to save and process geodata in differently structured data files (data import and export);
- know the technical-methodological aspects of data collection via remote sensing as well as GPS-based data recording in the field;
- know options and methods for analyzing environmental and remote sensing data;