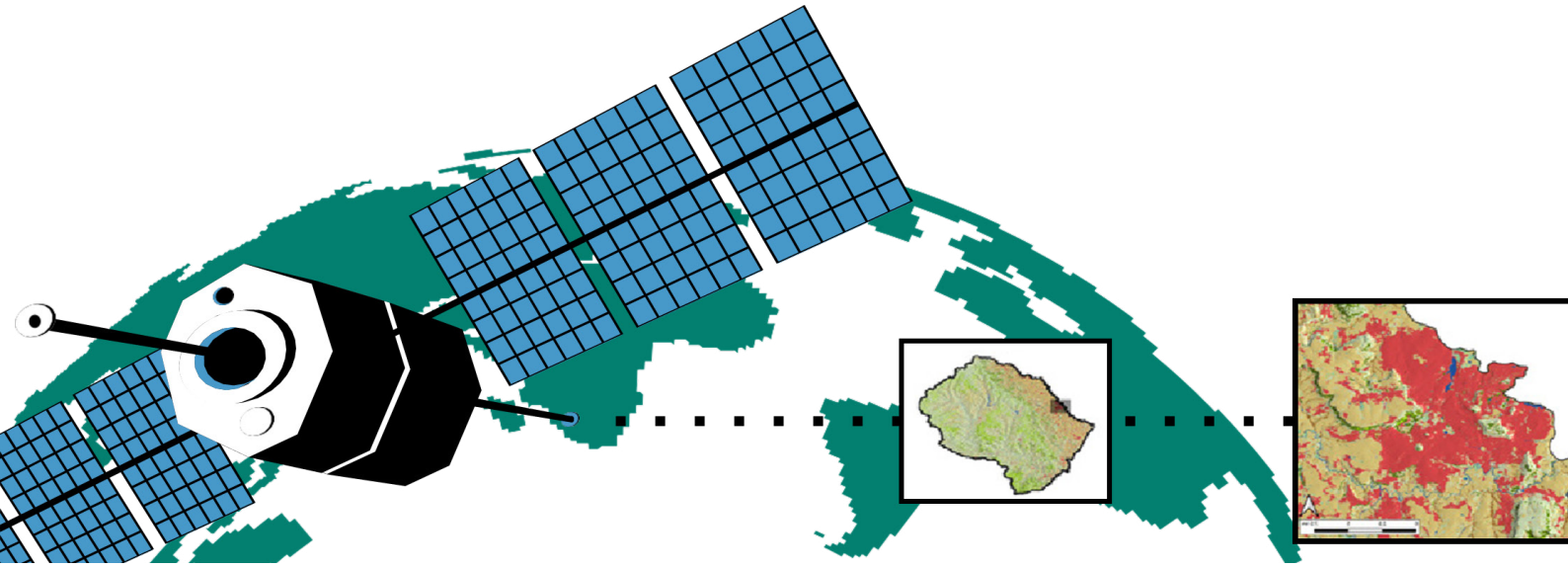
Food and Agriculture Organization of the United Nations

SUSTAINABLE DEVELOPMENT GOALS



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FAO-EOSTAT PROJECT TRAINING

Launched in 2021 by the Food and Agriculture Organization of the United Nations (FAO), the EOSTAT project uses next generation Earth observation tools to monitor land cover change.

First deployed in Lesotho, the innovative approach relies on free of charge Earth observation data, vegetation and climate modeling, as well as field survey data to build countries' capacity to produce official annual land cover statistics that are standardized, accurate, granular and validated.

The Office of Chief Statistician of FAO has developed this training programme to assist countries in using EOSTAT. If you are interested in organizing a training in your country, FAO can arrange it on-site and/or online.

Please send your request to the Chief Statistician (Chief-Statistician@fao.org) and to Lorenzo de Simone, Project Lead (Lorenzo.desimone@fao.org).

FAO-EOSTAT training programme aims to strengthen the technical expertise of professionals in three key areas:

1. Producing annual national land cover maps using FAO's newly developed methodology (2020).
2. Extracting statistics from the land cover map at both national and subnational levels.
3. Sharing geospatial products and statistics using web GIS technology.

COURSE STRUCTURE

The course consists of four modules distributed over four to five days.

Module I

In this module, participants will review the principles of land cover mapping, providing a comprehensive understanding of the concepts and typical workflow. They will also be introduced to commonly used satellite image products and tools.

Module II

The in-situ component will be addressed in this module, with emphasis on the importance of the survey design for the scope of land cover mapping. Participants will learn GIS and statistical methods for optimal survey design, as well as best practices in georeferencing data in the field.

The module will include an outdoor, hands-on exercise in the surroundings of the workshop site to gather in-situ data using GPS, followed by migration of GPS data in GIS and a Q&A exercise.

Module III

In this module, hands-on exercise will be carried out to guide participants through the entire process of producing a national land cover map for Lesotho using Google Earth Engine.

The main steps will include:

- connecting to EO data (Sentinel 2 data)
- pre-processing the data into Analysis Ready Data
- uploading in-situ data
- defining land cover classes
- training a classification algorithm (random forest)
- producing and visualizing the land cover map
- assessing map accuracy
- exporting the map in GIS format outside of Google Earth Engine.

Module IV

This module is dedicated to extracting statistics from the land cover map at the national and subnational levels, using common GIS desktop software (free and open source) such as QGIS.

Visit the FAO-EOSTAT project page: https://storymaps.arcgis.com/stories
Contact us: Chief-Statistician@fao.org