Step 1 Session 4

Course Program - 16th April 2025

H-SAF Satellite Precipitation Products

General Objective

This course aims to provide participants with a comprehensive understanding of H-SAF (EUMETSAT Satellite Application Facility on Support to Operational Hydrology and Water Management) precipitation products. By enhancing knowledge, data accessibility, and practical applications, the course will be a first step for professionals in hydrology, meteorology, climatology, and water management to use or integrate satellite-based information into their workflows.

Expected Outcomes

In this short course participants will:

- Gain a first understanding of the H-SAF precipitation products, their development, and their applications in hydrology, weather monitoring and climate studies.
- Develop some technical skills to access, process, and analyze H-SAF satellite data for operational hydrological monitoring and water management.
- Start enhancing their capacity to apply H-SAF products.

Prerequisites

Before attending the course, participants are encouraged to:

- Complete online courses that introduce the fundamentals of H-SAF precipitation products.
- Review the course presentations available at H-SAF Training Courses.
- Register for free access to the H-SAF training materials sending this module.

Planned Program

Introduction to H-SAF (10')

- Overview of the H-SAF initiative, its mission, and key stakeholders.
- The role of satellite data in hydrological applications and water resource management.

Understanding H-SAF Precipitation Products (50')

- Overview of the H-SAF precipitation products (e.g., instantaneous, accumulated, and blended products).
- Description of retrieval algorithms and product validation.
- Strengths, limitations, and uncertainties of satellite precipitation data.
- Comparison between satellite-based and ground-based precipitation measurements.

Accessing and Processing H-SAF Data (30')

- How to access H-SAF precipitation products, data format, resolution, and interpretation for hydrological applications.
- Tools for visualization and analysis (Jupyter Notebook).

Discussion and next step (30')

Format: Online

Trainers: S. Puca, D. Casella, L. Ciabatta, S. Gabellani, M Rolle.

Language: English