

# OBJECTIVES

## Research Coordination Objectives

The objectives are specific in addressing challenges identified as being timely and relevant and will thus enable progress in the field of OS beyond the state-of-the-art. They are achievable and time-related as they are clearly linked to activities and tasks of working groups and their timeframe and their success can be measured through concrete and visible deliverables.

RCO1: Define common data formats and metadata requirements for different types of opportunistic sensors.

RCO2: Coordinate OS data curation at the international level combining different types of OS from different regions and establish open access to this database.

RCO3: Establish a database of benchmark datasets for standardised testing of new algorithms for quality control of OS and their assimilation with traditional observations.

RCO4: Coordinate a benchmarking of algorithms for fast processing and quality control of OS observations suitable for operational use.

RCO5: Coordinate joint research agenda on methods for OS processing, quality control, and uncertainty assessment and synchronise community development of software implementing these methods.

RCO6: Establish operational access to OS precipitation products at least in two regions to facilitate their use (and indirect verification) in precipitation and hydrological forecasts.

RCO7: Disseminate results on OS research to relevant stakeholders and create awareness about challenges and opportunities related to OS precipitation retrieval and application.

RCO8: Support application of OS observations and precipitation products in operational precipitation nowcasts and hydrological forecasts.

RCO9: Identify strategies for unlocking OS data and global upscaling of OS weather monitoring.

## Capacity-building Objectives

CBO1: Consolidate the existing collaborations and foster knowledge exchange and joint research agenda on OS

CBO2: Connect hydrologists, meteorologists, climatologists, statisticians, and electrical and signal processing engineers and software developers to combine knowledge on the atmosphere, hydrometeorological observations and advanced signal processing methods to become worldwide reference community on the subject

CBO3: Establish the link between OS research, national meteorological services, and other stakeholders (OS data providers and precipitation product end-users) and act as a platform for coordinating integration of OS precipitation observations into standard observation networks and for communicating and removing barriers that prevent sharing of new sources of OS data

CBO4: Involve Early Career Investigators (ECI) into management of the Action and leading of Working Groups and increase their visibility and inclusion into OS community

CBO5: Provide training for ECI on processing and usage of OS data and on experimentation with new OS techniques emerging with technological development

CBO6: Foster collaboration and exchange of PhD students by organising STSMs (Short-Term Scientific Missions)

CBO7: Integrate researchers from COST Inclusiveness Target Countries as well as from Near Neighbour Countries into the community

CBO8: Promote open science policies and train Action participants in using tools provided by the European Open Science Cloud.

**About OPENSENSE (COST Action CA20136).** *OPENSENSE brings together scientists investigating different opportunistic sensors (e.g. microwave links, citizen science), experts from weather services, and end-users of rainfall products to build a worldwide reference opportunistic sensing community. The overarching goals of the COST are to overcome key barriers preventing data exchange and acceptance as hydrometeorological observations, define standards to allow for large-scale benchmarking of opportunistic sensing precipitation products and develop new methods for precipitation retrieval, coordinate integration of the opportunistic observations into traditional monitoring networks, and identify potential new sources of precipitation observations. Further details can be found here: <https://www.cost.eu/actions/CA20136/>*