

# MELOA: COVERING MARINE OBSERVATION GAPS

**MELOA (Multi-purpose/Multi-sensor Extra Light Oceanography Apparatus) offers a solution to extend and improve current in situ ocean observing and monitoring systems, in the form of low-cost wave resilient surface drifters, easy to embed in different types of marine observation systems**

## OBJECTIVES



Address different use cases for marine in-situ measurements



Open opportunities for market development of marine commercial sector & downstream users



Generate valuable in-situ data and derived data products for GEOSS and Copernicus



Provide data and information to implement the Sustainable Development Goals

## WAVY FAMILY

### WAVY Littoral

GNSS, GPRS, adjustable ballast module, detachable SIM card, IMU (MEMS)

### WAVY Basic

GNSS, GPRS, 1 thermistor

### WAVY Ocean

GNSS, Argos 2ways SatCom, adjustable ballast module, 2 thermistors, IMU, solar pannels

### WAVY Ocean-Plus

GNSS, Argos 2ways SatCom, adjustable ballast module, 2 thermistors, IMU, solar pannels, wave energy harvesting

### WAVY Ocean-Atmo

GNSS, Argos 2ways SatCom, Equatorial floating, adjustable ballast module, 4 thermistors, atmospheric pressure, IMU, solar pannels, wave energy harvesting

## USE CASES FOR TEST CAMPAIGNS

- 1 Estimation of wave parameters in the surf zone & derivation of nearshore bathymetry (**WAVY Littoral**)
- 2 Surface characterization of Ocean dynamic structures (**WAVY Ocean**)
- 3 Derivation of near-surface Ocean temperature fields (**WAVY Ocean**)
- 4 Public demonstrations of the nearshore circulation, with emphasis on rip currents (**WAVY Littoral**)
- 5 Citizen Science: involving the public in the data collection and characterization (**WAVY Littoral, WAVY Basic**)
- 6 Measuring the Height of Big Waves (**WAVY Littoral**)
- 7 Tracking displacement and dispersion in oil slicks (**WAVY Ocean**)
- 8 Data products (**WAVY Littoral, WAVY Ocean**)
- 9 Field Exploration Tests in Open Ocean (**WAVY Ocean, WAVY Ocean-Plus, WAVY Ocean-Atmo**)

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