

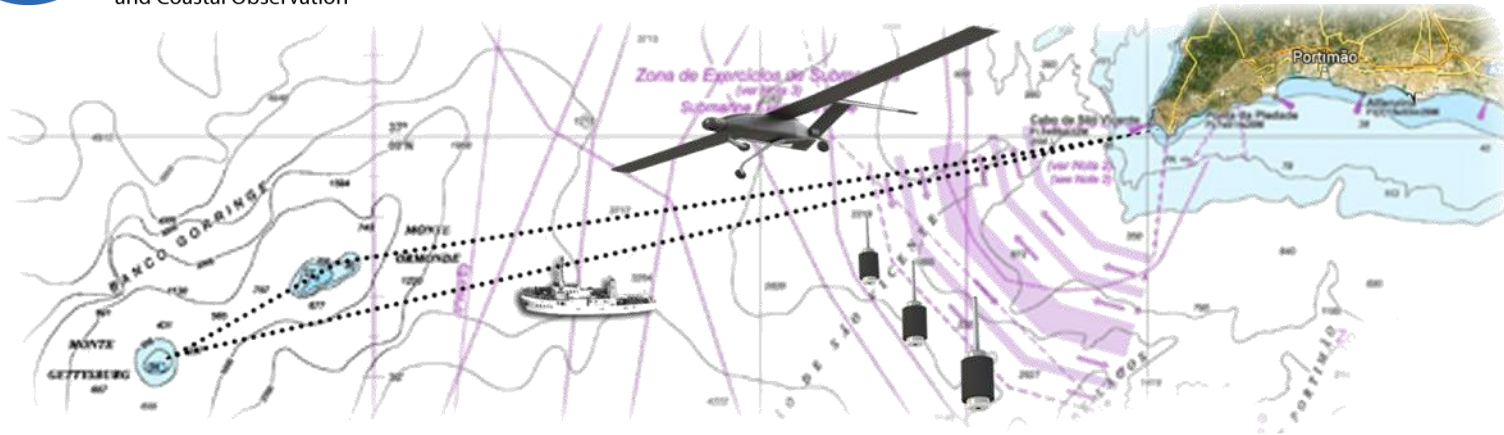


PT02_Aviso4_0011

System for Oceanic and Costal Observation using Drones



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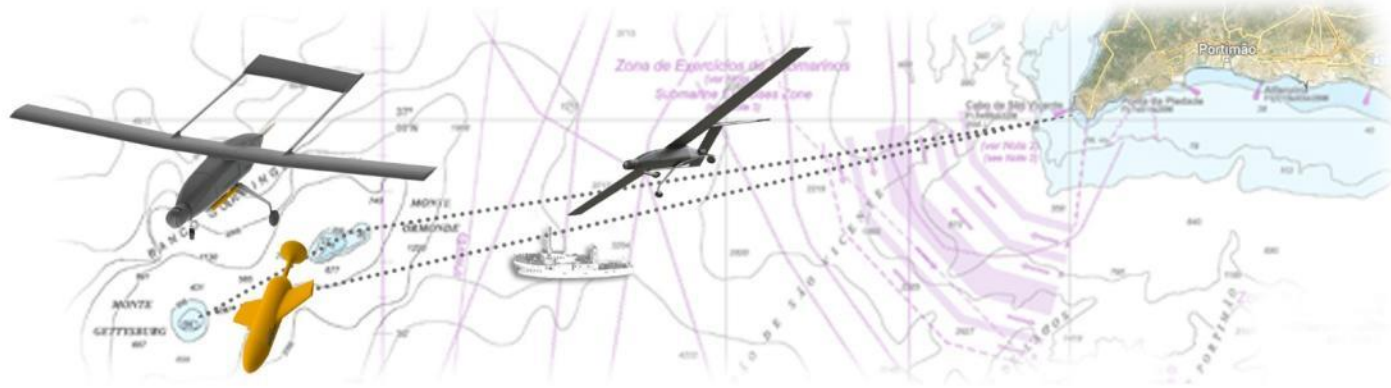


Two light weight Wingo UAVs will endure a 10-hour, 500 km, ocean monitoring collaborative flight to Goringe bank . Data on human activities and the environment will be collected and transmitted to a ground control station, then disseminated through the NIPIM@R initiative.

Visual images will be complemented with radiometric sea surface temperature data. Launched bathythermographs (AXBTs) will acquire upper ocean thermal structure and transmit the recorded data to the UAVs via the communications module.



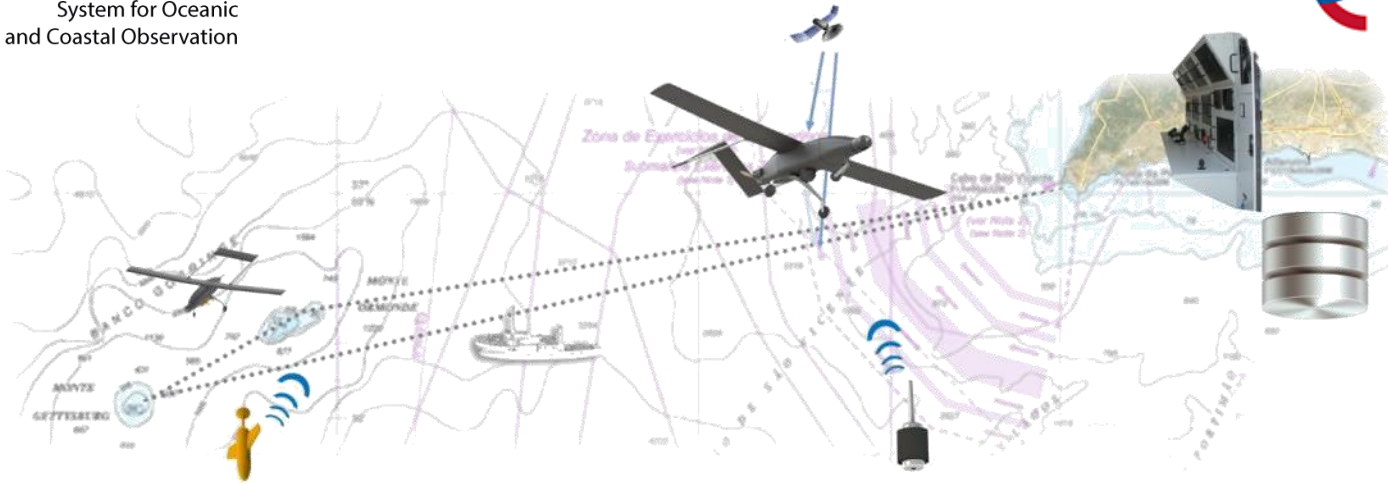
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Over the Gorringe bank, images of any human activities will be transmitted in real-time, together with AIS identification, to the control station, using the second UAV as relay. A pair of miniature expendable drifting underwater vehicles (m-XDUVs) carrying sensors will be launched and will start a free horizontal drift. Data collection will continue until instrument failure occurs. A piston system will surface the devices for satellite data transmission, and subsequent immersion. Solar panels will ensure battery recharge while at surface.



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One of the UAVs will carry an altimeter based on GNSS Reflectometry aiming to obtain sea surface elevation from a moving platform. This will open the way to monitoring tide and wave from satellite navigation data.

The whole system will perform autonomously, although it will be possible to modify the mission parameters as the mission develops.

SOCO-DRONE will enhance the remote mobile monitoring capacity of the ocean and coastal waters contributing to promote the Good Environmental Status of European waters.



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*Unmanned airborne
monitoring of remote
ocean areas*

