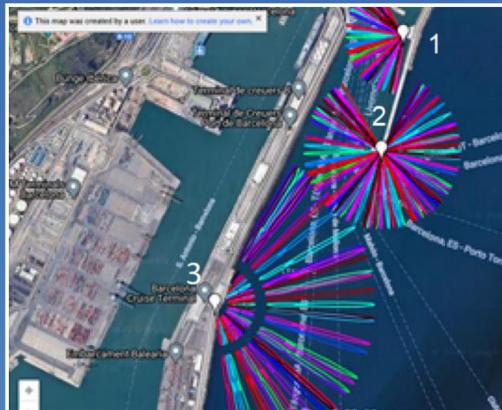
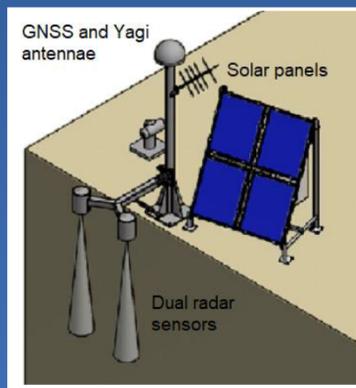


Low maintenance & low cost tide gauges

This innovative tide gauge harnesses Global Navigation Satellite System Interferometric Reflectometry, which allows the simultaneous measurement of sea level and Vertical Land Motion, eliminating the need for regular manual levelling exercises. The tide gauge uses above water radar technology for sensor longevity and ease of maintenance. Data will be delivered in near real time using inexpensive geostationary satellite and GSM telemetry solutions. Instruments will be solar powered, and customisation will be available to allow for monitoring of additional parameters (e.g., significant wave height, lightning strikes).

EXAMPLE

of the tide gauge setup and installation in Barcelona



HIGHLIGHTS

of this high quality tide gauge system:

- High-quality sensors for sea level and air pressure
- Vertical Land Movement
- Sensors mounted on durable marine-grade steelwork for enhanced resilience
- Low operating costs and low-maintenance
- Uses affordable or free telecommunication and power solutions
- Customization:
 - Can be tailored to monitor additional environmental parameters, including significant wave height and lightning detection

WHY

Globally, there is strong evidence of Climate Change–induced increases in sea level, tidal range and extreme events, elevating the risk to coastal populations. Developing economies are often most vulnerable to these hazards and require long-term sea level observations to understand and mitigate these threats. In contrast to traditional monitoring solutions, which are costly to install and maintain, and in the absence of sustained funding, have tended to fall rapidly into disrepair, this smart and innovative tide gauge design convinces with low costs and low maintenance.



Data

Contact: Begoña Pérez Gómez - bego@puertos.es