

The Oceanographic Services for Ports and Cities (OSPAC) software has integrated ocean in-situ measurements and high-resolution models to provide near-real-time alerts of physical parameters to support applications. OSPAC serves cities and adjacent ports seeking to minimize risks and to improve the environmental management performed by authorities and stakeholders concerned with the safety and sustainability of coastal regions.

Monitor and forecast variables:

- 🥏 Sea conditions
- Rip currents
- Flushing times
- Floating debris
- Flood risks
- Erosion risks

The system includes:

- Forecast models of local sea conditions
- Alerts for real-time monitoring
- On-demand services derived from the forecast outputs
- Integration with existing forecast models
 for wave, sea level, sea surface temperature
 and circulation conditions



Coastal areas are shared by port authorities, city authorities, and coastal communities who face common concerns about environmental risks and management disruptions. These problems include:



Water quality and sea pollution - coastal water quality depends on the activities of neighbouring cities, ports and beaches, as well as on coastal circulation.



Navigation safety in cities and ports - an increase in commercial and recreational ship activity in ports and coastal areas can lead to safety issues.



Beach safety - rip current forecasts and sea state monitoring and forecasting can help to prevent bathers and marine sports accidents.



Storm surges related hazards - flooding and coastal erosion can cause extensive destruction of infrastructure and property and can result in loss of life.







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