



Impact of Marine Industrial Activity

WSense's intelligent wireless system makes marine operations safer and more sustainable. Our technology replaces the blind spots of periodic sampling, which misses rapid changes. WSense supports the entire operational lifecycle: from pre-operational habitat mapping, to real-time alerts during operations for impact minimization, and post-operational monitoring to verify ecosystem recovery.

Functionality Overview

Biodiversity Identification

Uses AI to identify species and biodiversity health from underwater images and acoustics.

Chemical & Physical Parameters

Measures essential water quality metrics through the entire water column.

Digital Twin Integrated Subsea-Surface

Combines underwater sensor data with surface vehicles, satellite imagery and remote sensing.

AUV Coordination

Synchronizes Autonomous Underwater Vehicles for data collection and inspection.

Noise Alerting System

Detects acoustic noise levels outside mandated limits during marine operations.

Structural Health

Monitor the integrity and stability of critical underwater structures in real time.

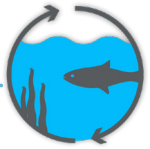
Diver Messaging & Localization

Enables real-time communication and precise positioning of divers underwater for mapping biodiversity.

Structural Subsidence

Monitors seabed movement and accumulation, measures subsidence of critical structures.

Benefits of IoUT for Impact of Marine Industrial Activity



Minimizes environmental impact

to marine life by optimizing the rate of marine operations, and enabling quick responses to hazards.



Ensures compliance

with environmental standards and early detection of harmful changes.



Supports marine habitat conservation efforts

and monitors overall biodiversity health



Provides a holistic view

of environmental conditions and cross validation of observed events (Eg. oil spill)



Helps maintain infrastructure integrity

and assess ecosystem recovery post-operations.



Increases efficiency in inspection

and coverage in large-scale marine operations.



Enhances safety and coordination

during inspection tasks.

WSense's IoUT in action

Terna, Italy's Transmission System Operator (TSO), has adopted WSense's wireless monitoring technology to ensure environmental safety during the positioning of submarine cable infrastructures.

By deploying a flexible network of marine sensors, Terna had continuously monitored environmental conditions in real time—before and during dredging and jetting operations. The system enables

dynamic positioning of monitoring units, real-time noise threshold detection, and instant correlation with turbidity, current direction and strength.

This approach provides unmatched responsiveness, reduces ecological risks, and ensures compliance with environmental standards, setting a new benchmark for sustainable energy infrastructure projects.

Read more on wsense.it or get in touch at wsense@wsense.it

