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# TRIDENT

Technology Based Impact Assessment Tool For Sustainable, Transparent Deep Sea Mining Exploration And Exploitation

Consortium:



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**TRIDENT** will create new technological tools for deep sea impact assessment. These new tools will empower a shared responsibility to supervise and monitor deep sea activities, and simultaneously preserve and enhance marine habitats, supporting an environmentally sustainable blue economy.

**TRIDENT's** system will use advanced technology and innovative solutions to operate autonomously in remote areas under extreme conditions. It will provide real-time data to permitting and supervising authorities to ensure compliance with international and national legal frameworks.

The project will complement all relevant physical, chemical, geological and biological parameters already known to be measured at the sea surface, midwater and seabed. **TRIDENT** will also identify gaps in methods of real-time data gathering and build data sets, and develop the technological solutions to address them.

# TRIDENT

## OBJECTIVES

1. Develop an integral environmental impact assessment capability
2. Advance the understanding of geological, biological and environmental processes
3. Develop an innovative dynamic infrastructure for real-time positioning, navigation, communication and awareness of deep sea activities and monitoring systems
4. Develop a holistic governance framework for Europe's Ocean resources sustainable exploitation.
5. Lead the creation of a new commercial ecosystem driven by a cluster of European service and technology providers

### What

A reliable, transparent and cost-effective system for continuous environmental impact assessment and monitoring of exploration and exploitation activities in the deep sea.

### Why

To allow the assessment of ecosystems and provide forecast for short and long term changes, as well as facilitating the development of mitigation strategies.

### How

An integrated system of static and mobile observatory platforms will collect, transmit, process and display near real-time environmental parameters at the surface, mid-water and seabed.