

# Horizon Europe 2022

## Call factsheet



### Monitoring and supervising system for exploration and future exploitation activities in the deep sea (RIA)

The global economic interest in deep-sea mineral resources has been growing and so are the concerns with the negative impacts on the deep sea ecosystems if mining activities start. Before any deep-sea mining activities start, the environmental impacts, and how to mitigate them, need to be well understood.

#### Scope:

- Identify all the bio-chemical-physical parameters to be monitored at the bottom of the sea, along the water column and at the surface;
- Identify all technical requirements needed for a real time monitoring of all parameters at the bottom, along the water column and surface, including the use of satellite data (Global Navigation Satellite System and Copernicus' satellite constellation) and to make it continuously available for remote access;
- Identify existing technological solutions and develop new ones to fulfil the technical requirements;
- Design and develop the architecture of the system in view of incorporating the monitoring parameters, the technical requirements and the legal constraints;
- Develop a trial version of the system and test it.

#### Topics:

- Develop technologies and systems to continuously monitor environmental impacts and mitigation methods of deep sea exploration and future mining;
- Develop multi-scale systems to identify gaps on the relevant available environmental data needed to develop statistically robust baselines that take into account the three- dimensional and temporal natural variability of the marine environment;
- Provide technological and systemic solutions for forecasting potential environmental impacts of using the developed monitoring and mitigation methods.



The indicative budget for this category is EUR 14.00 (Million).

#### Reference:

HORIZON-CL4-2022-RESILIENCE-01-02

Research and Innovation

Opening: 15 Oct 2021

Deadline: 30 Mar 2022

Call overview, Produced 01/10/2021. Visit our website [www.opencalls.space](http://www.opencalls.space)

#### Countries



all

#### Technology



Satellite data, GNSS, Copernicus  
Bio chemical, Ai, Algorithms

#### Activities



Ground truth, system  
development, technology  
development, requirement  
analysis

#### Contact



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