

# MiningImpact3

## *Ecological aspects of deep-sea mining Joint Action*

Building on two previous projects, **MiningImpact3 investigates how deep-sea ecosystems respond to mining activities**, focusing on **polymetallic nodules** and **seafloor massive sulphides**. With six planned research cruises, more than 100 scientists from nine countries are set to revisit sites in the Clarion Clipperton Zone, where mining tests were conducted years ago, to assess longer-term impacts. Disturbance experiments from the 1990s carried out in the Pacific Ocean show that affected seafloor communities have still not recovered today, 30 to 40 years later. Further expeditions along the Mid-Atlantic and Arctic Mid-Ocean ridges are also planned.

The MiningImpact3 project assesses **biodiversity and ecosystem variability**, models **ecosystem functioning**, studies **genetic connectivity of deep-sea populations**, and examines the **ecotoxic effects of mining pressures on marine communities**. It also compares deep-sea and land-based mining impacts, advances governance tools, and engages stakeholders on the ethical implications of extracting minerals from the ocean floor.



[jpi-oceans.eu](http://jpi-oceans.eu)

**MiningImpact3 delivers the scientific evidence needed** to develop indicators of ecosystem health and thresholds for "serious harm" **to inform the Mining Code**, the regulatory framework being developed by the International Seabed Authority, that will govern ocean floor mineral extraction.

Launched in August 2025 with a **budget of €9,016,657**, this project was funded under the framework of JPI Oceans by the Belgian Federal Science Policy Office (BELSPO) and the Department of Economy, Science & Innovation, Government of Flanders, Belgium, the Federal Ministry of Research, Technology and Space (BMFTR), Germany, the Ministry of Universities and Research (MUR), Italy, the Dutch Research Council (NWO), The Netherlands, the Research Council of Norway (RCN), Norway, the National Centre For Research and Development (NCBR), Poland and the Department for Environment, Food and Rural Affairs (DEFRA), United Kingdom.

**Dr. Matthias Haeckel, GEOMAR Helmholtz Centre for Ocean Research Kiel**, is the MiningImpact3 project coordinator. The project consortium includes 34 partners from nine European countries.



JPI Oceans Secretariat contact:  
[willem.demoor@jpi-oceans.eu](mailto:willem.demoor@jpi-oceans.eu)

