







NECCTON products







Pelagic Biogeochemistry

| | | | | | |
|---|----------------------------------|---|--------------------------------|---|------------------------------------|
|  | Mesozooplankton biomass |  | Micronekton biomass |  | Suspended particulate matter (SPM) |
|  | Particulate Organic Matter (POM) |  | Dissolved Organic Matter (DOM) |  | Reflectance |








Benthic

| | | | | | |
|--|-----------------|--|---|--|--------------------|
|  | O ₂ | Oxygen near bottom |  | pH | pH near bottom |
|  | CO ₂ | Carbon flux to bottom |  | Carbon in sediment | Carbon in sediment |
|  | Benthic flora |  | Macrozoobenthos |  | Sedimentary rates |

Nekton

| | | | | | |
|--|------------------------------|---|------------------------------|---|----------------|
|  | Small-pelagic biomass |  | Large pelagics biomass |  | Marine mammals |
|  | Unspecified fish and biomass |  | Higher Trophic Level Habitat |  | Demersal fish |

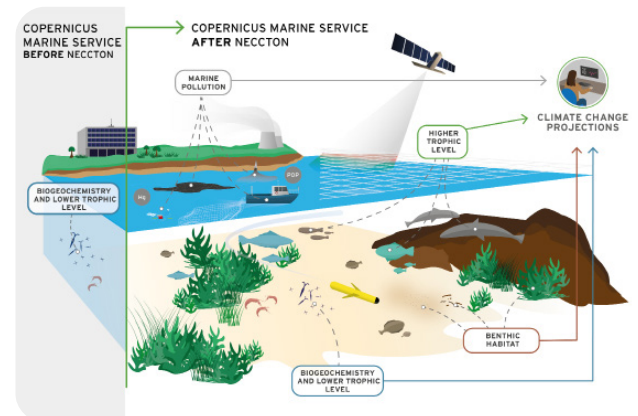
Stressors

| | | | | | |
|---|---------|---|-------------------------------|--|----------------------|
|  | Plastic |  | Persistent Organic Pollutants |  | Mercury |
|  | Oil |  | Fisheries pressure |  | Climate change |
| | | | |  | Multi-stressor index |

Making Marine Ecosystem Models Operational to Predict and Protect Ocean Biodiversity

About NECCTON

Recognising the urgent need to address the ocean biodiversity crisis, NECCTON is developing next-generation ecosystem modelling products focused on fisheries, pollution, and benthic habitats. These models will enable the Copernicus Marine Service to better inform policy makers, marine managers, researchers, and the public with robust, operational data and predictions.



A New Generation of Marine Predictions

State-of-the-art Copernicus systems currently represent marine ecosystems only at the plankton and micronekton levels. NECCTON expands this capability by developing advanced models that simulate the dynamics of:

- Fish and fisheries
- Benthic flora and fauna
- Pollutants and human pressures

This step change will unlock a new era of marine ecosystem prediction and management.

Our Approach

NECCTON combines science, innovation, and digital integration through a three-pronged strategy:

01

Developing coupled ecosystem models that link physical, chemical, and biological processes.

02

Integrating data with AI and machine learning to enhance accuracy and relevance.

03

Building a shared modelling framework with the Copernicus Marine Service to enable open data, code, and knowledge exchange.

Contributing to the UN Ocean Decade

NECCTON, endorsed under the Marine Life 2030 programme, advances global goals to protect biodiversity, support sustainable food systems, and drive ocean-based climate solutions.

Your Gateway to Free, FAIR Marine Data

All NECCTON products will be made freely available through a dedicated data portal - your connection to the digital ocean infrastructures of the Copernicus Marine Service.



Discover how NECCTON's open data and models are shaping the digital ocean of tomorrow.