

HORIZON
2020

Services based on Ecosystem data AssiMiLation: Essential Science and Solutions

Fact Sheet

Project Information

SEAMLESS

Grant agreement ID: 101004032

[Project website](#)

DOI

[10.3030/101004032](https://doi.org/10.3030/101004032)

Project closed

EC signature date

22 October 2020

Start date

1 January 2021

End date

31 December 2023

Funded under

INDUSTRIAL LEADERSHIP - Leadership in
enabling and industrial technologies – Space

Total cost

€ 1 499 851,25

EU contribution

€ 1 499 851,25

Coordinated by

PLYMOUTH MARINE
LABORATORY LIMITED
 United Kingdom

This project is featured in...



Evolution of Copernicus services to meet global environmental, emergency and security challenges

Project description

Improving marine environment monitoring by introducing new methodologies

Oceans are key players in mitigating climate change. Serving as a major heat and carbon sink, they absorb up to 30 % of human-generated carbon emissions and provides up to 17 % of global animal proteins. Unfortunately, oceans are also vulnerable to impacts brought by climate change, and current technologies are still unable to accurately monitor their changes. The EU-funded SEAMLESS project will introduce a novel data assimilation prototype to improve model simulations of ocean plankton dynamics and associated biogeochemical processes. The project will advance the capability of the Copernicus Marine Environment Monitoring Service to provide operational indicators of marine health and productivity. Its ultimate aim is to more accurately evaluate climate change impacts on ocean ecosystems and food security.

Fields of science (EuroSciVoc)

[natural sciences](#) > [earth and related environmental sciences](#) > [hydrology](#)

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) > [satellite technology](#)

[natural sciences](#) > [biological sciences](#) > [biochemistry](#) > [biomolecules](#) > [proteins](#)

[medical and health sciences](#) > [health sciences](#) > [nutrition](#)

[natural sciences](#) > [biological sciences](#) > [ecology](#) > [ecosystems](#)



Keywords

CMEMS

marine ecosystem indicators

ensemble data assimilation (DA)

Copernicus Sentinel

ocean-colour

Biogeochemical-Argo

operational oceanography

carbon cycle

food-security

water quality

Programme(s)

[H2020-EU.2.1.6. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies – Space](#) (MAIN PROGRAMME)

[H2020-EU.3.5. - SOCIETAL CHALLENGES - Climate action, Environment, Resource Efficiency and Raw Materials](#)

Topic(s)

[LC-SPACE-18-EO-2020 - Copernicus evolution: Research activities in support of the evolution of the Copernicus services](#)

Call for proposal

[H2020-SPACE-2018-2020](#) 

[See other projects for this call](#)

Sub call

H2020-SPACE-2020

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



PLYMOUTH MARINE LABORATORY LIMITED

Net EU contribution

€ 339 307,50

Total cost

€ 339 307,50

Address

PROSPECT PLACE WEST HOE

PL1 3DH Plymouth

 **United Kingdom** 

SME 

Yes

Region

South West (England) > Devon > Plymouth

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (6)



ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG

 **Germany**

Net EU contribution

€ 242 580,00

Address

AM HANDELSHAFEN 12

27570 Bremerhaven 

Region

Bremen > Bremen > Bremerhaven, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost
€ 242 580,00



UNIVERSITE GRENOBLE ALPES

 France

Net EU contribution

€ 179 445,00

Address

621 AVENUE CENTRALE
38058 Grenoble 

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost
€ 229 112,50

 THIRD-PARTY 

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 France

Net EU contribution

€ 49 667,50

Address

RUE MICHEL ANGE 3
75794 Paris 

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Website](#) 

[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
No data



STIFTELSEN NANSEN SENTER FOR MILJOOG FJERNMALING

Norway

Net EU contribution
€ 240 575,00

Address
JAHNEBAKKEN 3
5007 Bergen

SME
Yes

Activity type
Research Organisations

Links
[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 240 575,00



ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE

Italy

Net EU contribution
€ 244 213,75

Address
Borgo Grotta Gigante 42/C
34010 Sgonico-Trieste

Region
Nord-Est > Friuli-Venezia Giulia > Trieste

Activity type
Research Organisations

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 244 213,75



BOLDING & BRUGGEMAN APS

Denmark

Net EU contribution

€ 204 062,50

Address

STRANDGYDEN 25 BAARING MARK
5466 Asperup

SME

Yes

Region

Danmark > Syddanmark > Fyn

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 204 062,50

Last update: 29 July 2024

Permalink: <https://cordis.europa.eu/project/id/101004032>

European Union, 2025