Innovative marine soundscape characterization to effectively mitigate ocean and sea noise pollution

Fact Sheet

Project Information

SEASOUNDS
Grant agreement ID: 101119769

DOI
10.3030/101119769

Funded under
Marie Skłodowska-Curie Actions (MSCA)

Total cost
€ 0,00

EU contribution
€ 2 790 583,20

Coordinated by
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
CNRS
France

Objective

SEASOUNDS aims to better characterize and predict marine soundscapes, in order to provide recommendations for appropriate and proportionate underwater noise mitigation solutions, for improved know-how, decision-making and standards setting for a sustainable Blue Growth limiting the impact on marine wildlife. SEASOUNDS addresses important knowledge gaps related to understanding, characterization and modeling of the entire noise transfer chain, from the noise source (e.g. offshore foundation installation, unexploded ordnance UXO disposal, shipping) to the receiver (whether a technological tool or an animal). SEASOUNDS’ methodological approach
is built around the idea that, to address effectively these complex scientific questions, we need to go beyond the underwater acoustics-related approaches. Thus, SEASOUNDS incorporates concepts, models, and tools from seismology and mechanics to:
(i) develop solutions based on Distributed Acoustic Sensing (DAS) technology to monitor marine mammals and provide information on seabed properties;
(ii) characterize the soundscape of eco-regions where noise pollution is poorly known and hence insufficiently regulated, and highlight the temporal noise dynamics marine life has to face;
(iii) investigate methodology biases on noise assessment, biases being induced either by numerical models or by uncertainties in the environment properties;
(iv) develop efficient physics-driven modeling of noise generation (including seabed vibrations) and propagation in shallow waters;
(v) study the impact of noise and vibrations on marine invertebrates and plants;
(vi) understand the link between exposures of individual animals and the overall quality of the habitat that the animals live in.

SEASOUNDS will train the next generation of professionals with high multidisciplinary, inter-sectoral, and transverse skills, who will comprehend noise pollution issues in a holistic way, and hence be highly valuable for public organizations, policy makers, and stakeholders who have to take science-based decisions.

**Fields of science**

- natural sciences > biological sciences > zoology > mammalogy > cetology
- natural sciences > earth and related environmental sciences > geology > seismology
- natural sciences > earth and related environmental sciences > environmental sciences > pollution
- natural sciences > biological sciences > zoology > invertebrate zoology

**Keywords**

- underwater noise pollution
- marine soundscape
- bioacoustics
- ecoacoustics
- offshore foundation installation
- UXO disposal
- shipping
- DAS technology
- HPC modeling
- marine mammals
- marine invertebrates

**Programme(s)**

2 of 12
Topic(s)

HORIZON-MSCA-2022-DN-01-01 - MSCA Doctoral Networks 2022

Call for proposal

HORIZON-MSCA-2022-DN-01

See other projects for this call

Funding Scheme

HORIZON-TMA-MSCA-DN - HORIZON TMA MSCA Doctoral Networks

Coordinator

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

Net EU contribution

€ 848 080,80

Address

Rue michel ange 3
75794 Paris
France

Region

Ile-de-France > Ile-de-France > Paris

Links

Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding

€ 0,00

Participants (6)
NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU
Norway
Net EU contribution
€ 595 497,60
Address
Hogskoleringen 1
7491 Trondheim
Region
Norge > Trøndelag > Trøndelag
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Other funding
€ 0,00

UNIVERSITA DEGLI STUDI DI PADOVA
Italy
Net EU contribution
€ 259 437,60
Address
Via 8 febbraio 2
35122 Padova
Region
Nord-Est > Veneto > Padova
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Other funding
€ 0,00
UNIVERSITA DEGLI STUDI DI PAVIA

Italy

Net EU contribution

€ 259 437,60

Address

Strada nuova 65
27100 Pavia

Region

Nord-Ovest > Lombardia > Pavia

Links

Contact the organisation  Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00

AARHUS UNIVERSITET

Denmark

Net EU contribution

€ 301 788,00

Address

Nordre ringgade 1
8000 Aarhus c

Region

Danmark > Midtjylland > Østjylland

Links

Contact the organisation  Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00

TECHNISCHE UNIVERSITEIT DELFT

Netherlands
Partners (11)

**UNIVERSITAT POLITECNICA DE CATALUNYA**
Spain

Net EU contribution

€ 251 971,20

Address

Calle jordi girona 31
08034 Barcelona

Region

Este > Cataluña > Barcelona

Links

Contact the organisation [🔗]  Website [🔗]
Participation in EU R&I programmes [🔗]
HORIZON collaboration network [🔗]

Other funding

€ 0,00

**NAVAL GROUP**
France

Net EU contribution
€ 0,00

Address
Rue du docteur finlay 40-42
75015 Paris

Region
Île-de-France > Île-de-France > Paris

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

Other funding
€ 0,00

---

SERVICE HYDROGRAPHIQUE ET OCEANOGRAPHIQUE DE LA MARINE

France

Net EU contribution
€ 0,00

Address
Rue du chatellier 13
29200 Brest

Region
Bretagne > Bretagne > Finistère

Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links
Contact the organisation  
Participation in EU R&I programmes  
HORIZON collaboration network

Other funding
€ 0,00
EQUINOR ASA

Norway

Net EU contribution

€ 0,00

Address

Forusbeen 50
4035 Stavanger

Region

Norge > Vestlandet > Rogaland

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

Other funding

€ 0,00

ECOLE NATIONALE SUPERIEURE DE TECHNIQUES AVANCEES BRETAGNE

France

Net EU contribution

€ 0,00

Address

2, rue francois verny
29806 Brest cedex 9

Region

Bretagne > Bretagne > Finistère

Links

Contact the organisation Website
Participation in EU R&I programmes HORIZON collaboration network

Other funding

€ 0,00
CENTRE D ETUDES ET D EXPERTISE SUR LES RISQUES L ENVIRONNEMENT
LA MOBILITE ET L AMENAGEMENT

France

Net EU contribution

€ 0,00

Address
25 av francois mitterrand
69500 Bron

Region
Auvergne-Rhône-Alpes > Rhône-Alpes > Rhône

Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00

ACCOBAMS

Monaco

Net EU contribution

€ 0,00

Address
Terrasses de fontvieille, 2
98000 Monaco

Activity type
Other

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
CORNELL UNIVERSITY

United States

Net EU contribution

€ 0,00

Address

Pine tree road 373
14850 Ithaca ny

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Fondazione WWF Italia

Italy

Net EU contribution

€ 0,00

Address

Via po 25c
00198 Rome

Region

Centro (IT) > Lazio > Roma

Activity type

Other

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Stichting GROW
Netherlands
Net EU contribution
€ 0,00
Address
Arthur van schendelstraat 550
3511 MH Utrecht

SME
Yes
Region
West-Nederland > Utrecht > Utrecht
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Other funding
€ 0,00

UNIVERSITE D'AIX MARSEILLE
France
Net EU contribution
€ 0,00
Address
Boulevard charles livon 58 le pharo
13284 Marseille
Region
Provence-Alpes-Côte d'Azur > Provence-Alpes-Côte d'Azur > Bouches-du-Rhône
Links
UNIVERSITE COTE D'AZUR
France

Net EU contribution
€ 0,00

Address
Grand chateau 28 avenue valrose
06100 Nice

Region
Provence-Alpes-Côte d'Azur > Provence-Alpes-Côte d'Azur > Alpes-Maritimes

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

EC signature date 13 July 2023
Last update: 24 July 2023

Permalink: https://cordis.europa.eu/project/id/101119769

European Union, 2023