

# CALL FOR PROPOSALS



## BRILLIANT MARINE RESEARCH IDEA GRANTS 2022



OFFERED BY VLIZ PHILANTHROPY

SPONSORED BY OTARY, ANTEA GROUP AND DEME



Call open to PhD students affiliated to  
a Flemish university or university college





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*The VLIZ philanthropy is a program set up by the Flanders Marine Institute vzw (VLIZ) in order to raise additional funds to support scientists, engineers and students to come up with creative solutions for current problems, to develop innovative techniques and to support sustainable use of our seas and ocean. Any form of support means a step forward for our scientific knowledge.*

*With this grant for a 'Brilliant Marine Research Idea', we hope to inspire and enable **PhD students of Flemish universities or Flemish university colleges** to explore and pan out a brilliant idea, an out of the box idea, an on the top research topic, but always framed within their ongoing marine research.*

*For more information regarding VLIZ philanthropy, check [vliz.be/your-contribution](https://vliz.be/your-contribution) and [vliz.be/brilliant-marine-research-idea-grant](https://vliz.be/brilliant-marine-research-idea-grant).*



## Summary

<b>Budget 2022</b>	15.000 EUR funded by VLIZ philanthropy with the financial support of the sponsors Otary, DEME and Antea Group Maximum fund per grant: 5.000 EUR
<b>Implementation period</b>	The proposed idea has to be executed within one year after the grant is awarded. Start date: 1 March 2022. End date: 28 February 2023.
<b>Eligibility</b>	PhD students affiliated to a Flemish university or Flemish university college with, at the time of application, less than 6 years of research experience at predoc level (i.e. since starting PhD research). Applicants can only benefit from this grant once during their PhD.
<b>Launch of the call</b>	17 November 2021
<b>Submission deadline</b>	28 January 2022
<b>Selection</b>	The selection will be made before 21 February 2022, by the VLIZ Scientific Committee and representatives of the sponsors Otary, DEME and Antea Group.
<b>Topics</b>	Marine research ideas contributing to solving a research question linked to a.o. the themes identified in the philanthropy research agenda: marine pollution, oceans and human health, marine biodiversity, climate change, ocean related disasters and marine exploration. Topics supported by the sponsors: <b>Otary</b> wants to support a research topic of interest with respect to the offshore energy sector and renewable energy production. <b>DEME</b> sponsors research situated in engineering & technology, fisheries & aquaculture sciences, economics or biological sciences. <b>Antea Group</b> sponsors research related to coastal engineering and hydrodynamics, emerging contaminants & microplastics, ecosystem services, water systems & circular economy from offshore applications. More specifics on pages 6-7.
<b>Required documents</b>	- application form - cv of the PhD student - letter of consent of the supervisor affiliated to the student's university or university college (free format)



## What is a grant for ‘Brilliant Marine Research Idea’?

Over the last 20 years, the Flanders Marine Institute (VLIZ) has become a knowledge institution indispensable to the marine research landscape. What started as an institute focusing on science support, has evolved into a national and international point of contact for marine research. VLIZ initiates and carries out multidisciplinary research and supports marine experts by providing research infrastructure, data, information and knowledge. VLIZ supports the blue economy and reaches out to a broad public. VLIZ further broadens its marine horizons and aims at becoming a world player in the field of marine and coastal research.

In 2013, VLIZ was recognized as a charitable organization and therefore developed a philanthropy program. Through this program, VLIZ is able to raise additional funds through membership fees, donations, sponsorships, etc. to provide financial support to promote marine research worldwide. The Brilliant Marine Research Idea grants are offered by VLIZ philanthropy and receive additional sponsoring from **Otary**, **DEME** and **Antea Group**.

Otary is a Belgian knowledge centre for offshore wind energy and complex energy projects. The company develops finances, builds and operates offshore wind farms and provides a full range of services during an offshore wind project's life cycle. Otary currently has 3 offshore wind projects in its portfolio, representing a total capacity of approximately 800 MW.

DEME is a world leader in the specialised fields of dredging, solutions for the offshore energy industry, infra marine and environmental works. The company can build on more than 140 years of know-how and is a front runner in innovation and new technologies. DEME's vision is to work towards a sustainable future by offering solutions for global challenges: a rising sea level, a growing population, reduction of CO2 emissions, polluted rivers and soils and the scarcity of natural resources. DEME can rely on 5.200 highly skilled professionals and a modern fleet of over 100 vessels.

Antea Group is an international consultancy and engineering firm, specialised in full-service solutions in the fields of water, infrastructure, the environment and urban planning. In Belgium, around 250 specialists develop multidisciplinary solutions to complex problems. Antea Group works towards building a sustainable future, together with their customers.

The grants for a ‘Brilliant Marine Research Idea’ are intended to inspire and enable **PhD students affiliated to a Flemish University or Flemish University College** to execute a brilliant idea during their PhD within the frame of their research. It should concern **an out of the box idea, an additional research topic that was initially not foreseen in the PhD, but that would add an extra value to the ongoing research.**

For 2022, **VLIZ philanthropy** offers **three grants** for a ‘Brilliant Marine Research Idea’. VLIZ philanthropy seeks to fund a marine research idea that can contribute to solving a hypothesis-based marine research question. Topics of interest are (amongst others) the themes identified in the philanthropy research agenda including pollution, ocean and human health, marine biodiversity, climate change, ocean related disasters and marine explorations.



For 2022, VLIZ philanthropy has the honour to receive sponsoring for the 'Brilliant Marine Research Idea' grants from **Otary**, **DEME** and from **Antea Group**.

**Otary** wants to support a research topic of interest with respect to the offshore energy sector and renewable energy production; and moreover, to include the broad range of marine research in the framework of a sustainable future for our seas and ocean.

Framed within the area of interest of the company, **DEME** sponsors a BMRI grant for a research topic situated in engineering & technological sciences (including civil engineering), fisheries & aquaculture sciences, economic sciences or biological sciences.

Framed within the interest of the company, **Antea Group** sponsors a research topic related to to engineering & hydrodynamics, emerging contaminants & microplastics, ecosystem services, water systems and circular economy from offshore application.

The fund of maximum 5.000 EUR can be used to assist the junior postdoctoral researcher in lab and/or fieldwork, data acquisition and analysis, visits to other institutes to use specialized facilities, acquisition of equipment or software needed for a certain analysis and so on. The fund cannot be used to reimburse the use of existing lab infrastructure within his/her research group/department, for personnel costs, to pay for travel costs that amount to more than 50% of the grant or to attend conferences.

## Budget and implementation period

The overall budget available for the grants is 15.000 EUR from VLIZ philanthropy with the financial support of the sponsors Otary, DEME and Antea Group. However, each grant will have a maximum fund of 5.000 EUR.

The grant will be awarded to the successful applicant personally and the terms and conditions (including a short report) of the award will be discussed and negotiated prior to the implementation of the idea.

The proposed idea has to be executed within one year. The selection of the ideas will take place before 21 February 2022. The successful applicants can start their activities from 1 March 2022 and complete them by 28 February 2023.

## Eligibility and selection criteria

### Eligibility of applicant

- PhD student with, at the time of application, less than 6 years of research experience at predoc level (i.e. since starting PhD research)
- Affiliated to Flemish university or Flemish university college
- Consent of the university (college) supervisor

### Eligibility of budget and implementation period

- Maximum request for 5.000 EUR
- Maximum duration of 1 year
- Implementation between 1 March 2022 and 28 February 2023



## Eligibility of activities and related costs

The grant (budget allocated by VLIZ) includes all possible university/institute 'overhead' or other costs, i.e. no additional will be accepted:

- No personnel costs
- No conference fees
- No reimbursement of the use of existing lab infrastructure within your research group or department
- Travel costs cannot amount to more than 50% of the grant
- The research topic should concern an out of the box idea, an additional research topic that was initially not foreseen in the PhD, but that would add an extra value to the ongoing research

## Eligibility of research domain for the VLIZ philanthropy BMRI grant

Topics of interest are marine related and are (amongst others) the themes identified in the philanthropy research agenda including pollution, ocean and human health, marine biodiversity, climate change, ocean related disasters and marine explorations.

## Eligibility of research domain for the BMRI grant sponsored by Otary

Otary is fascinated by marine sciences in general and is willing to sponsor a brilliant research idea in line with the spirit of the company. Therefore, Otary wants to support a research topic of interest with respect to the offshore energy sector and renewable energy production; and moreover, to include the broad range of marine research in the framework of a sustainable future for our seas and ocean.

1. Exploring the Offshore Wind Farm Potential
  - 1.1. Monitoring biodiversity/habitat mapping
    - 1.1.1. CCTV camera
    - 1.1.2. Multibeam echosounder/side-scan sonar surveys assessing also seabed morphological dynamics
    - 1.1.3. ROV subsea inspections
    - 1.1.4. Through fibre cable sensing techniques
    - 1.1.5. Usage of AI/machine learning
  - 1.2. Sustainable multi-use of OWF space
    - 1.2.1. Complementary renewable energy
    - 1.2.2. Energy storage
    - 1.2.3. Aquaculture
    - 1.2.4. North Sea pollution clean-up
    - 1.2.5. Eco-tourism
    - 1.2.6. Test environment for innovative technologies / training etc.
  - 1.3. Increase reliability of offshore forecasting models by OWF measurements
2. ECONomics
  - 2.1. Economies of Scales applied to Belgian OWF, how to establish a framework to decrease footprint and increase efficiency of O&M operations.
  - 2.2. Evaluation of OWF lifetime extension beyond design life
    - 2.2.1. Replace with newer technologies and recycling of old components
    - 2.2.2. Prolonge lifetime of existing infrastructure
  - 2.3. (Remote) Technologies to replace/reduce fossil fuel usage by vessels



## Eligibility of research domain for the BMRI grant sponsored by DEME

The eligible topics are marine related and fit within one of the following descriptions, ranked according to decreasing preference:

1. Engineering and technological sciences (including civil engineering)
  - 1.1. Coastal engineering and hydrodynamics
    - 1.1.1. Nature inspired solutions for coastal management (protection)
    - 1.1.2. Nature inspired beach protection solutions for a more sustainable coast management
    - 1.1.3. Nature inspired flood protection for rivers and estuaries
  - 1.2. Multi-use of space / marine spatial planning
    - 1.2.1. Renewable energy / aquaculture / others
  - 1.3. Ammunition and toxic waste dump solutions
  - 1.4. Microplastics and ocean pollution solutions
  - 1.5. Offshore (geotechnical) engineering - sustainable scour protection
2. Fisheries & aquaculture sciences
  - Aquaculture in offshore wind farms
3. Economic sciences
  - Nature Based Solutions business case - bringing nature inspired solutions up to a mature business level
4. Biological sciences
  - 4.1. Effect sound on marine mammals – offshore works
  - 4.2. Eolic sand transport and influence on dune management

## Eligibility of research domain for the BMRI grant sponsored by Antea Group

1. Coastal engineering and hydrodynamics
  - Nature based solutions for coastal protection / coastal management
  - Innovative and alternative coastal protection
  - African west coast (solutions to coastal erosion)
2. Emerging contaminants and microplastics
  - Observation, behavior, data processing and modeling of microplastics
  - Solutions/beneficial use for dredged material containing emerging contaminants/microplastics
  - Water quality and monitoring of dredged & disposed material containing emerging contaminants/microplastics
3. Ecosystem services
  - Ecosystem services of offshore and nearshore environments
  - Ecosystem services to improve offshore spatial planning
4. Water systems
  - Saline intrusion in coastal areas
  - Saline intrusion related to lock operations
  - Water recycling, aquifer storage and recharge, water purification capacity of dune areas
5. Circular economy from offshore applications
  - Recycling of materials from the offshore energy sector
  - Beneficial use of dismantled offshore infrastructure



## Eligibility of submission modalities

Timely and complete submission.

## Selection procedure

After the deadline has passed, the scientific board of VLIZ together with representatives of Otary, DEME and Antea Group will evaluate the submitted applications and make a final selection. The jury has the right to withhold the grants, if it decides that none of the proposed proposals can be taken into consideration.

All applicants will be personally informed about the success of their proposal.

The grant is awarded during the VLIZ Marine Science Day on 2 March 2022. The successful applicant will be invited to present his/her work at the VLIZ Marine Science Day 2023.

## How to submit an application?

Applicants can apply for the grant by sending **following documents** to [filantropie@vliz.be](mailto:filantropie@vliz.be):

- application form
- cv of the PhD student
- letter of consent of the supervisor affiliated to the student's university or university college (free format)

**Subject** of the email: Proposal for a 'Brilliant Marine Research Idea' 2022 (PhD students)

**Submission deadline:** 28 January 2022

## Where to turn for more information?

### Institute

Flanders Marine Institute (VLIZ)  
InnovOcean site  
Wandelaarkaai 7  
8400 Oostende  
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### Contact person

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