

OceanICU Youth Competition

Terms of Reference (ToR)



Deadline for applications: 17 February 2027



Funded by
the European Union



UK Research
and Innovation

This work was funded by the European Union under grant agreement no. 101083922 (OceanICU) and UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10054454, 10063673, 10064020, 10059241, 10079684, 10059012, 10048179]. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.



Table of contents

1. Introduction to the OceanICU Youth Competition.....	3
1.1. What is the objective of the Youth Competition?.....	3
1.2. Why should I/we participate in the competition?.....	3
1.3. What do I/we have to do to participate?.....	4
1.4. What is the timeline for the Youth Competition?	6
1.5. Who are the organisers of the Youth Competition?	6
1.6. What is OceanICU?	7
2. Topic of the Youth Competition.....	7
2.1. What is the topic of the Youth Competition?	7
2.2. Where can I/we find information about this topic?	8
3. Participation in the Youth Competition	9
3.1. Who can participate in the Youth Competition?.....	9
3.2. Can groups of young people participate in the competition?	10
3.3. What are the eligibility criteria for participation?.....	10
4. Practical details to submit applications	11
4.1. How can I/we submit my/our application?	11
4.2. What are the eligible formats for my science outreach material?	12
4.3. How will my/our personal data be protected?	12
4.4. Who can I/we contact if I/we have questions?	13
4.5. Who will evaluate my/our application?.....	13
4.6. What are the evaluation criteria?.....	14
4.7. How many laureates will be selected?	15
5. Laureates	15
5.1. How will the laureates be announced?	15
5.2. How will the laureates get visibility for their work?	15
6. Communication about the OceanICU Youth Competition.....	16
6.1. How will information about the competition be communicated?.....	16
6.2. What will happen to my application after the competition?.....	16



1. Introduction to the OceanICU Youth Competition

1.1. What is the objective of the Youth Competition?

The OceanICU Youth Competition is organised to enable young people to learn about the scientific research carried out in the [OceanICU project](#). This project aims to improve our understanding on the role of the ocean in the global carbon cycle.

The competition invites young people (age 14-30 years old) to understand the work done by members of the project team and to explain one aspect of the work they have found interesting in a science outreach material (e.g. a poster, an infographic or a short video or podcast) that

- highlights what they have learned and why they think it is important;
- could be shared with other young people and the general public.

By doing this, the OceanICU Youth Competition more generally aims to

- increase interest in ocean science and scientific careers;
- enable young people to discover how a large European research project works and the outcomes of the project;
- enable young people to learn about the biological carbon pump;
- contribute to capacity building in science communication.

1.2. Why should I/we participate in the competition?

Are you a young person between 14 and 30 years old? By taking part in the OceanICU Youth Competition, you could

- learn how the ocean captures and stores carbon and why it is important to understand this in the context of climate change;
- access information on recent scientific research results via publications, blog posts and webinar recordings;



- discover the multiple aspects of the OceanICU project and get the opportunity to speak directly with some members of the project team during two online events;
- gain new knowledge and develop your skills in science communication;
- submit your application with the science outreach material you have developed and get the opportunity to gain visibility for your work;
- receive a certificate of participation in the competition.

In addition, if you are selected as one of the laureates of the competition

- your science outreach material will be published on the OceanICU website;
- you will be invited to write a blog post for the OceanICU website and record a short video in which you present your science outreach material for an exhibition (see below) ;
- your science outreach material and your short video will be part of an exhibition at the [European Ocean Carbon Summit](#) which will be held in Brussels (Belgium) on 26 May 2027.

1.3.What do I/we have to do to participate?

You are invited to design and produce a science outreach material (e.g. a poster, an infographic or a short video) and submit it online by completing the OceanICU Youth Competition [application form](#).

Below are the steps to follow to participate in the Youth Competition.

- ☐ Carefully read these **Terms of Reference** to check the conditions to participate in the competition, ensure that you understand the topic of the competition and get all the details on how the competition is organised.
- ☐ Explore the OceanICU [project website](#) to learn about the project and the work carried out by the project team.



☐ Find out from the project website and the additional resources provided in these Terms of Reference what the **biological carbon pump** is and try to explain it in your own words.

☐ **Choose one of the questions below** that you would like to investigate further:

1. Why is it important to understand how the biological carbon pump works?
2. How do scientific researchers carry out their work in the OceanICU project (e.g. methods of collecting samples, data analysis, modelling, remote sensing, laboratory experiment, stakeholder focus groups)?
3. How does research on whales / fish / cold water corals / zooplankton / marine particles help us understand ocean carbon? [select one of the five options]
4. What makes OceanICU an interdisciplinary project and why is interdisciplinarity important for researching the biological carbon pump?
5. What tools does OceanICU develop to make better decisions for sustainable management of the ocean in the future?
6. How have human activities and pressures influenced the ocean carbon cycle, and how has OceanICU contributed to this research field?

☐ **Investigate your chosen question** by consulting the resources available on the website and the additional resources provided in these Terms of Reference.

☐ Once you have gained a good understanding of the topic, decide **what message you would like to share** about what you have learned and **how you will communicate this message**.

☐ Select the **format of your science outreach** material, **design and produce your science outreach material**.



❑ Complete the OceanICU Youth Competition [application form](#) and upload your science outreach material by **17 February 2027 at 18:00 CET** at the latest.

1.4. What is the timeline for the Youth Competition?

The Youth Competition was launched on **1 October 2026** and will remain open for four months and a half. The deadline for application is **17 February 2027 at 18:00 CET**.

Two online meetings will be organised during which applicants will be able to learn more about the OceanICU project and ask questions, respectively on **4 November 2026** and **13 January 2027**. These meetings will be announced on the [OceanICU website](#).

Results will be announced on **31 March 2027**.



Laureates' work will be featured at the [European Ocean Carbon Summit](#) which will take place in Brussels (Belgium) on **26 May 2027**.

1.5. Who are the organisers of the Youth Competition?

The OceanICU Youth Competition is organised by partners of the OceanICU project, which is coordinated by [NORCE](#), a research institute in Norway. The Youth Competition is led by [Seascope Belgium](#), on behalf of the OceanICU project.

These Terms of Reference were developed by an OceanICU Working Group composed of Seascope Belgium and four Early Career Researchers (ECRs) involved in the project, [Filipa Afonso](#) (Marine Institute), [Bianca Thobor](#) (GEOMAR), [Eloïse Savineau](#) (University of Exeter) and [Ben Cala](#) (Heriot-Watt University, Lyell Centre).



1.6. What is OceanICU?

[OceanICU](#) is a five-year [Horizon Europe](#) project that seeks to gain a new understanding of the biological carbon pump and its processes to provide fundamental knowledge and tools to help policy makers, regulators and Ocean industry—fishing and mining, along with the wider blue economy—manage and understand the impact of their actions on Ocean carbon. This will ultimately lead to a better approach for addressing climate change in alignment with the [European Union Green Deal](#) to reduce the net emissions of greenhouse gases to Zero by 2050.

To undertake this complex objective, the project brings together [30 partners](#) from around Europe with expertise and methods from different fields including Climate Science, Ocean Biogeochemistry, Biological Oceanography, Marine Ecology, Ocean Modelling, Social Science, Software Development and Data Science.

The project started on 1 November 2022 and will run until 31 October 2027. It is funded by the European Commission and UK Research and Innovation (UKRI).

2. Topic of the Youth Competition

2.1. What is the topic of the Youth Competition?

The Youth Competition focuses on the **biological carbon pump (BCP)**.

What is it? The biological carbon pump (BCP) is the suite of biological, chemical and physical mechanisms that transport photosynthetically fixed organic carbon from the sunlit ocean to the [mesopelagic layer](#), where most part is respired back to CO₂. The remaining being ultimately sequestered into the deep ocean (Ricour et al. 2022).

Why is it important? The ocean contains about 40 times more carbon than the atmosphere. The biological carbon pump contributes to ocean carbon storage by moving organic carbon out of the surface ocean into deeper waters in sinking particles, vertically migrating organisms and physical



circulation ([Ricour, F., Guidi, L., Gehlen, M. et al. 2023](#)). Carbon stored in seabed sediments can remain trapped for long periods of time. By keeping this carbon out of the atmosphere, sediment storage helps reduce greenhouse gas concentrations and mitigate climate change.

Why has it been selected for the Youth Competition? It is the key focus of scientific research carried out in the OceanICU project, and it is highly relevant to global efforts to mitigate climate change and build a more sustainable future.

How can you address this topic in the competition? After researching the topic, the objective is that you explain what the biological carbon pump is to people who have not heard about it. You can do this by answering one of the following six questions.

- Why is it important to understand how the biological carbon pump works?
- How do scientific researchers carry out their work in the OceanICU project (e.g. methods of collecting samples, data analysis, modelling, remote sensing, laboratory experiment, stakeholder focus groups)?
- How does research on whales / fish / cold water corals / zooplankton / marine particles help us understand ocean carbon? [select one of the five options]
- What makes OceanICU an interdisciplinary project and why is interdisciplinarity important for researching the biological carbon pump?
- What tools does OceanICU develop to make better decisions for sustainable management of the ocean in the future?
- How have human activities and pressures influenced the ocean carbon cycle, and how has OceanICU contributed to this research field?

2.2. Where can I/we find information about this topic?

To learn about ocean carbon and gain understanding of the research carried out in the project, you can use the many resources available on the [project website](#) - including the [blogs posts](#), the [posters](#), the [webinar recordings](#), the [scientific papers](#) and the OceanICU [Decision Support Tool](#) demonstrators.



In addition, you can find information in the following two reports available online:

- [Integrated Ocean Carbon Research \(IOC-R\) Report](#)
- [Third World Ocean Report](#)

To understand what the biological carbon pump is, you can refer to the following webpages:

- [OceanICU - The Biological Carbon Pump: From Overlooked to Actionable](#)
- [Woods Hole Oceanographic Institution – Ocean Learning Hub – Biological Carbon Pump](#)
- [Carbon sequestration by the biological pump is not exclusive to the deep ocean](#)
- [Ocean School – The biological carbon pump](#)
- [European Space Agency – untangling the ocean biological carbon pump](#)

You can find marine data and maps at:

- Global Ocean Data Analysis Project Version 3 ([GLODAP v3](#))
- Integrated Carbon Observation System ([ICOS](#))
- European Marine Observation and Data Network ([EMODnet](#))
- [European Atlas of the Seas](#)

As mentioned above, **two online meetings** will be held by members the [project team](#) for applicants, respectively on **4 November 2026** and **13 January 2027**. These meetings will be announced on the [OceanICU project website](#).

3. Participation in the Youth Competition

3.1. Who can participate in the Youth Competition?

The Youth Competition is open to all young people aged 14 to 30 years old worldwide.



The competition includes three age groups:

- young people aged 14 to 18 years old
- young people aged 19 to 24 years old
- young people aged 25 to 30 years old

Mandatory: If you are below 18 years old, please note that we ask you to upload authorisation from your parents to participate in the competition when you submit your application. Please also indicate the name of the teacher who supported your work and the name of your school.

3.2. Can groups of young people participate in the competition?

You can apply by yourself or as a group of up to five young people within the same age category. If you are applying as a group in the age category 14 to 18 years old, you can include 19 years old participants if they are studying with you.

3.3. What are the eligibility criteria for participation?

Submitted applications will be forwarded to the Jury for evaluation only if they meet the following criteria:

- ✓ you are **aged 14 to 30 years old**;
- ✓ your application is submitted in **English, the working language of the OceanICU project**;
- ✓ your science outreach material, if it contains text or speech, is in **English** or includes **subtitles in English**;
- ✓ your science outreach material **does not include** illegal, offensive, inappropriate, or objectionable material, and does not infringe any person's or organisation's rights to privacy;
- ✓ **respect of copyrights**: all images, graphs and visuals used are original or openly licensed and correctly credited;



- ✓ **respect of the right of image:** if people appear in your science outreach material, they are not recognisable in images or, if they are, you have received written consent from them - and their parents if they are not yet 18 years old - to appear in the images;
- ✓ your application correctly addresses the selected topic of **ocean carbon** and the **biological carbon pump**;
- ✓ the **application form is fully completed**, including all **consent form questions**;
- ✓ the **format of your science outreach material** respects the guidelines provided in these Terms of Reference;
- ✓ your science outreach material is **original work** you have created;
- ✓ any **AI tools** used in support of your work (e.g. subtitles, translations, checking grammar or supplementing your own research) are declared in the application form.

Please note that any science outreach material fully produced by AI (e.g. AI used to develop the content and/or the graphic design) will not be considered eligible and will thus not be sent to the Jury for evaluation.

4. Practical details to submit applications

4.1. How can I/we submit my/our application?

To submit your application, you need to

- complete the [online application form](#) available on the OceanICU website;
- upload your science outreach material online as indicated in the application form.

Once you have submitted your application, you will receive an automatic e-mail confirming that your application has been well received.



Participation in the competition is voluntary and is free of any charges or fees. Participants can withdraw from the competition at any time if they wish to do so by sending an e-mail at youthcompetition@ocean-icu.eu.

4.2. What are the eligible formats for my science outreach material?

Let your imagination thrive to choose how you will communicate on the biological carbon pump! Below are the formats that you can use.

Type	Format	Examples	Accepted size
Document	PDF	Poster Blog post text Written interview Poem Quiz Board game	1-5 pages File size: maximum 20MB
Presentation	PDF	Slideshow with or without voice over and video recording	Maximum 10 slides File size: maximum 20MB
Storytelling	PDF	Story booklet Comics	Maximum 5 pages File size: maximum 20MB
Images	PDF JPEG	Infographic Drawings	File size: maximum 20MB
Short videos	Link to YouTube video	Animation Hands-on experiment Interview Artwork Art performance	Maximum 5 minutes
Short sound recording	Link to the recording on a podcast channel	Podcast Song	Maximum 5 minutes

4.3. How will my/our personal data be protected?

In the application form, you will be asked to provide the following personal data:

- your name
- your e-mail address
- your age category
- the country where you currently live



- your main activity

This information will be used by the OceanICU partners solely for the purpose of organising this Youth Competition. Your e-mail address will be stored in the project file accessible only to the organisers of the competition and will not be shared externally. Information about your country of residence, your age category and your main activity will be used by OceanICU partners to analyse general participation statistics related to the Youth Competition. General anonymised participation statistics will be used in project reporting.

The online application form includes a set of consent questions related to the publication and exhibition of your science outreach material if your application is selected by the Jury of the competition (please refer to the related information below). Please read this information carefully.

The OceanICU privacy policy is available at <https://ocean-icu.eu/privacy-policy/>

If you withdraw from the competition, you may also request that your personal data be deleted. If this is the case, please email us at youthcompetition@ocean-icu.eu

4.4. Who can I/we contact if I/we have questions?

Any question can be addressed by e-mail to Nathalie Van Isacker (Seascope Belgium) at youthcompetition@ocean-icu.eu

4.5. Who will evaluate my/our application?

Applications will be evaluated by a Jury composed of experts who are members of the OceanICU project team, including science researchers and communication experts.

The Jury will be organised by Seascope Belgium (SSBE) on behalf of OceanICU. Members of the Jury will rate each received application according to the evaluation criteria (see below) and send their evaluations to SSBE who will compile the evaluation results for each age category. The outcome of this process will be a ranking of the applications in each age category.



Jury decisions are final and cannot be appealed.

4.6. What are the evaluation criteria?

Members of the Jury will take five evaluation criteria into consideration. The weight for each criterion is indicated in the table below.

Criteria	Number of points	How can I / we get a good score?
Relevance to the topic of the Youth Competition	20	Read section 2 on the topic of the Youth Competition carefully and make sure you have understood it well. Do some background reading using the references included under section 2.2 to define what you will communicate about.
Quality of scientific content	20	Search the OceanICU website and the suggested documentation for information about the topic. If needed, search for additional information. Use only reliable references. Participate in the two planned online meetings with members of the OceanICU project team to learn more about the project and ask questions.
Clear message for a wide audience	20	Show your science outreach material to people around you and ask them what they have learned from it.
Creativity	20	Use your talents to communicate! Science outreach includes many forms of communication including visuals, video, animations and art (e.g. poetry, songs, theatre performance).
Accessibility and potential outreach impact	20	Ask yourself: can everyone benefit from my work? Are there barriers to understanding my work? If so, how can I resolve this?
Total	100	

Please note that if an application gets a score of 0/20 for quality of scientific content because it includes significant incorrect information, it will be considered ineligible.



4.7. How many laureates will be selected?

The applications that rank first and second in each age category, will be selected as laureates. There will thus be six laureates as shown in the table below.

If within an age category, there is only one or no application with a score of more than 50/100, only one or no laureate will be selected in this category. In this case, one or two additional laureates will be selected in other categories, so the total number of laureates is of six laureates.

Age category	Laureates
Young people aged 14 to 18 years old	Ranking 1 st Ranking 2 nd
Young people aged 19 to 24 years old	Ranking 1 st Ranking 2 nd
Young people aged 25 to 30 years old	Ranking 1 st Ranking 2 nd

5. Laureates

5.1. How will the laureates be announced?

Laureates of the OceanICU Youth Competition will receive an **e-mail** announcing their application has been selected by the Jury.

An **article** will be published on the OceanICU website to announce the laureates of the competition and showcase their science outreach materials online. News about the outcomes of the competition will be shared via the **OceanICU newsletter** and **social media** channels.

All participants will receive, by e-mail, a **certificate of participation** in the Youth Competition.

5.2. How will the laureates get visibility for their work?

Laureates will get **visibility for their science outreach materials** through:

- publication of their science outreach material on the [OceanICU](#) website;



- an invitation to write a [blog post](#) for the OceanICU website and record a short video in which they present their science outreach material for an exhibition (see below) ;
- exhibition of their science outreach material and their short video at the [European Ocean Carbon Summit](#) which will be held in Brussels (Belgium) on 26 May 2027.

All published and exhibited science outreach materials will clearly indicate the credit to the laureates who have produced them. We need approval for using your personal data.

In addition, laureates will have the **opportunity to participate in an online meeting** with a member of the project team during which they will be able to discuss the topic they have addressed in their science outreach materials and ask questions.

6. Communication about the OceanICU Youth Competition

6.1. How will information about the competition be communicated?

Information about the competition is communicated via the [OceanICU website](#), the OceanICU [newsletter](#) ([subscribe](#) to the newsletter) and [social media](#).

The Ocean ICU partners will also disseminate information about the Youth Competition towards many networks and stakeholders involved in youth engagement, science communication, research, education, ocean literacy and other relevant areas of work.

6.2. What will happen to my application after the competition?

Laureates' science outreach materials and related blog posts will be available on the [OceanICU website](#) which will remain active five years after the end of the OceanICU project (five years after 31 October 2027).



All received applications will be stored in the OceanICU project file accessible only to OceanICU project partners.

Any question can be addressed by e-mail to youthcompetition@ocean-icu.eu