



ProBleu

Promoting ocean and water literacy
in school communities

Call HORIZON-MISS-2022-OCEAN-01

Deliverable D2.2

Evaluation of the Network of European Blue Schools

Lead partner: Earthwatch

Authors: Anna Witter, Luigi Ceccaroni, Stephen Parkinson, James Sprinks,
Bianca Cruz, Kaushiki Das

2024



Funded by
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.



UK participants in Horizon Europe Project ProBleu [101113001] are supported by UKRI grant numbers: 10082336 Earthwatch Europe, 10081234 Plymouth Marine Laboratory and 10082355 Ocean Conservation Trust.

Grant agreement number: 101113001
 Project short title: ProBleu
 Project full title: Promoting ocean and water literacy in school communities
 Start of the project: June 2023
 Duration: 36 months

Deliverable title: Evaluation of the Network of European Blue Schools
 Deliverable number: 2.2
 Nature of the deliverable: Document, Report
 Dissemination level: Public

WP responsible: WP2
 Lead partner: Earthwatch

Citation: Witter, A., Ceccaroni, L., Parkinson, S., Sprinks, J., Cruz, B. & Das, K. (2024). Evaluation of the Network of European Blue Schools. *Deliverable report of the Horizon Europe project ProBleu (grant agreement No 101113001)*

Due date of deliverable: Month 12 (June 2024)

Actual submission date: Month 12

Deliverable version log:

Version as date	Status/change	Partner	Authors
2024_04_17	Initial document and content creation	Earthwatch	Anna Witter

2024_05_20	Additional content creation	<i>Earthwatch</i>	Anna Witter, Stephen Parkinson, Bianca Cruz, James Sprinks, Luigi Ceccaroni, Kaushiki Das
2024_05_29	Review	<i>OCT</i>	Jessica Briggs
2024_05_30	Review	<i>PML</i>	Stefan Simis
2024_05_30	Review	<i>CSIC</i>	Eli Bonfill, Alina Luna
2024_05_30	Production of the final version	<i>Earthwatch</i>	Anna Witter, Stephen Parkinson, Bianca Cruz, James Sprinks, Luigi Ceccaroni, Kaushiki Das

Table of contents

Table of contents.....	4
Summary.....	5
List of abbreviations.....	6
1. Introduction.....	7
1.1 Background.....	8
1.1.1 The Network of European Blue Schools.....	8
1.1.2 Mission Starfish.....	8
2. The process of joining the NEBS.....	8
2.1 The application.....	9
2.2 Certificates.....	9
2.3 Changes to the application.....	9
2.3.1 Change in mandatory fields.....	9
2.3.2 Streamlined forms dependent on partner programmes.....	10
2.3.3 Exemption for ProBleu schools.....	10
3. Review methodology.....	10
3.1 The selection process.....	11
3.2 The review.....	11
4. A review of existing Blue Schools.....	16
4.1 Current distribution of Blue Schools.....	16
4.1.1 Validity of NEBS certification.....	18
4.2 Review results.....	18
4.2.1 Learning approaches.....	18
4.2.2 Impact.....	19
4.2.3 Engagement and participation.....	19
4.2.4 Scalability.....	20
5. A review of teaching resources.....	22
6. Next steps.....	23
6.1 Standardisation.....	23
7. Conclusions.....	24
References.....	25
Annex 1 - NEBS application.....	26
Annex 2 - Blue School Questionnaire from Blue School Global Network.....	32

Summary

The *Network of European Blue Schools* (NEBS) aims to create a more ocean and freshwater-literate society where schools collaborate with ocean professionals and other schools, and teachers are able to share experiences nationally and internationally. This network is improving ocean and water literacy but needs to grow and be supported to reach its desired impact. ProBleu expands and supports the NEBS through promotion, funding, teaching materials, and sharing mechanisms, as well as by streamlining schools into certification. ProBleu funding of school projects attracts a wide diversity of new members, improving ocean and water literacy across school communities and contributing to the UN Sustainable Development Goals to protect marine and freshwater ecosystems and biodiversity, and prevent and eliminate pollution.

This report involved reviewing Blue School projects to better understand the projects and the resources produced. There are approximately 400 schools that have been certified by the NEBS since the beginning of the programme. To conduct an informative review of the projects carried out by these schools, a selection of 67 projects were designated for review. This review focussed on several aspects of each project, such as the learning approaches they utilised, the degree of engagement and participation, impact, scalability, and the resources produced during the project. Assessing these criteria across projects allows us to identify strong and weak approaches, leading to recommendations of future focus areas.

The reviewed projects revealed numerous positive impacts, particularly in the areas of *community engagement* and *ease of understanding and replication*. A potential weak area was identified in *knowledge-sharing and transfer of resources*, and *narrative and communication*. Given that both transferring resources and communication are often information technology based tasks, the results suggest that some schools may be able to improve in these areas by adding online elements to their projects. Identifying this as a future focus is the first step to support and encourage teachers to carry out this important element of the project and share their results and resources online. It was also observed that resources shared online are rarely in the format of teaching material or courses. Encouraging this type of material to be shared will likely help grow a collection of reusable teaching resources on ocean and freshwater literacy.

There are multiple Blue School networks across the world that cover a range of different countries, often overlapping. Standardisation of these networks will have numerous benefits, such as more effective dissemination of knowledge, best practices, and resources globally. Such benefits have been recognised, and the Blue School Global Network is currently in development by UNESCO. They are in the process of collecting data from Blue School national coordinators. A global network will encourage consistency between approaches and the way schools are evaluated, as well as a more comprehensive understanding of the current status of ocean and water literacy within schools.

List of abbreviations

DMP – Data management plan

EMSEA - European Marine Science Educators Association

NEBS - Network of European Blue Schools

SDG - United Nations Sustainable Development Goal

VET - Vocational Education and Training

AA-BSN - All-Atlantic Blue Schools Network

Deliverable package

ProBleu D2.2 consists of two related documents:

- 'ProBleu - D2.2 Evaluation of the Network of European Blue Schools' - this document
- 'ProBleu - D2.2 project evaluation dataset 2024_05_21' - a spreadsheet consisting of the review of a selection of projects from the Network of European Blue Schools

1. Introduction

The needed generational change in the role of society to actively look after the health of water resources can be achieved through the expansion of ocean and water literacy in schools. Ocean literacy can be defined as ‘an understanding of your influence on the ocean, and it’s influence on you’ (McKinley *et al.*, 2023; NOAA, 2013). An ocean literate person understands the essential principles and fundamental concepts about the ocean; can communicate about the ocean in a meaningful way; and is able to make informed and responsible decisions regarding the ocean and its resources (NOAA, 2013). The *Network of European Blue Schools* (NEBS) [https://maritime-forum.ec.europa.eu/theme/ocean-literacy-and-blue-skills/ocean-literacy/network-blue-schools_en] is established under the EU4Ocean Coalition for Ocean Literacy [https://maritime-forum.ec.europa.eu/theme/ocean-literacy-and-blue-skills/ocean-literacy/eu4ocean-coalition_en]. The NEBS has improved ocean and water literacy; however, this network needs to grow and be supported. ProBleu expands and supports growth of the NEBS, as, for all ProBleu-funded school projects, a process will be established for them to automatically become part of the NEBS. ProBleu funding attracts a wide diversity of new members, improving ocean and water literacy across school communities and contributing to the UN *sustainable development goals* (SDGs) to protect marine and freshwater ecosystems and biodiversity, and prevent and eliminate pollution.

The objective of ProBleu *work package 2 (WP2) Pipeline to support and accelerate the growth of the Network of European Blue Schools* is to guide schools through the process of accreditation as Blue Schools, more specifically:

- to encourage accreditation in the NEBS and reduce barriers to the process; and
- to work with schools funded through the ProBleu calls to co-create pathways towards increased impact and achievement of the objectives of Mission Starfish: Restore our Oceans and Waters by 2030 (European Commission, 2020).

This deliverable, **D2.2 Evaluation of the Network of European Blue Schools**, includes the following main topics:

- The process of joining the Network
- A review of existing Blue Schools
- A review of teaching resources

The aim of this report is to understand the current state of the NEBS. The associated project evaluation dataset (see Excel file “ProBleu - D2.2 project evaluation dataset 2024_05_21” in the deliverable package) will be shared in order to help schools become Blue Schools because it provides examples of projects across various countries. The report will also help schools by discussing barriers in the application process (section 2.3), and identifying potential data gaps (section 2.4.2). By analysing existing Blue Schools, we can identify best practices and develop resources to guide the development of projects submitted to obtain this certification. For example, we can assess the projects against criteria and identify the weaknesses in the current and past Blue Schools’ projects.

1.1 Background

1.1.1 The Network of European Blue Schools

The NEBS is a hub for schools and teachers interested in bringing ocean literacy to the school curriculum. The Network is coordinated by the *European Marine Science Educators Association* (EMSEA) and brings together diverse organisations, projects and people, contributing to water literacy and the sustainable management of the ocean. The NEBS is one of the three pillars of the EU4Ocean Coalition, which has the support of the *Directorate-General for Maritime Affairs and Fisheries* (DG MARE). There are five mandatory criteria for compliance with the NEBS [https://maritime-forum.ec.europa.eu/theme/ocean-literacy-and-blue-skills/ocean-literacy/network-blue-schools/how-develop-project_en]:

- develop a project with interlinked activities;
- produce a clear output;
- involve all students;
- collaborate with a local partner;
- communicate project results.

The NEBS encourages schools to embed the project into multiple subjects across the curriculum, sparking the interest of a diverse range of students. The NEBS also promotes the project's expansion outside the school by encouraging local collaboration and communication of the results to a wider audience.

1.1.2 Mission Starfish

Mission Starfish: Restore our Ocean and Waters by 2030 has five overarching objectives (European Commission, 2020):

1. Filling the knowledge and emotional gap
2. Regenerating marine and freshwater ecosystems
3. Zero pollution
4. Decarbonising the economy to protect our ocean, seas and waters
5. Revamping governance

Further details on the Mission, its specific targets, and their relevance to ProBleu can be found in **D2.1 ProBleu Pipeline for Blue Schools** (Woods *et al.*, 2023).

2. The process of joining the NEBS

The process of joining NEBS was mapped out in **D2.1 ProBleu Pipeline for Blue Schools**. There have since been a few minor changes to the application to become a member. The process is shown in more detail in this report. Knowledge of the precise process of joining the NEBS is essential for ProBleu for several reasons:

- To ensure the ProBleu application process also captures all the necessary information required to join the NEBS.
- To reduce duplication of efforts.
- To support schools in becoming accredited within the NEBS.

2.1 The application

The application to join the NEBS consists of questions regarding the school and the intended project. The questions are asked in the format of a Microsoft Form, which has been used since September 2023 [URL to the form: <https://forms.office.com/e/vRE6YOp6Lv>] and can be found in Annex 1.

2.2 Certificates

Depending on their location and involvement in a project, schools can receive three different Blue School certificates [https://maritime-forum.ec.europa.eu/theme/ocean-literacy-and-blue-skills/ocean-literacy/network-blue-schools/blue-school-certificate_en].

- **European Blue School certificate:** Issued for schools that meet the criteria and are in an EU country.
- **Associated Blue School certificate:** Issued for schools that meet the criteria and are outside the EU.
- **Partner Blue School certificate:** For *vocational education and training* (VET) schools that did not complete a Blue School project but specialise in training in marine (blue) jobs and can support or collaborate with general education schools on their way to prepare their students for the blue market and maritime-related studies and jobs.

2.3 Changes to the application

The ProBleu consortium has maintained close contact with EMSEA to understand how the NEBS application will change in the coming years. This section addresses changes planned by EMSEA in response to the main issues teachers encountered when submitting applications. Some amendments were already applied when the current application form was launched in September 2023.

2.3.1 Change in mandatory fields

In the previous application process, applicants were asked some questions twice (specifically about their local partners and communication activities), which created problems in cases where the applicants answered in a contradictory way. These cases would then require the evaluator to contact the applicant to clarify. The form has since been altered (Annex 1) to change the five criteria to mandatory fields with a description explaining the meaning of each criterion, with the answer as a Yes/No tickbox.

2.3.2 Streamlined forms dependent on partner programmes

EMSEA is working to establish partnerships with other related regional and national programmes such as Escola Azul (Blue School) [<https://escolaazul.pt/>] or Les aires marines éducatives (Educational marine areas) [<https://www.ofb.gouv.fr/les-aires-marines-educatives>]. Once collaboration is established with these programmes, it is proposed that one of the first questions (or the first question) in the NEBS application should address whether the applicant is already involved or certified with one of these programs, using a Yes/No answer. If the applicant responds 'Yes', they will be transferred to a shorter version of the form that only requires the applicant to define whether they are an EU or non-EU country, select their partner programme, and provide minimal information such as name of school, project name and duration (for the certificate), GPS coordinates (for the map), contact information, and GDPR consent.

Applicants not involved in partner programmes will select 'No' for the question regarding partner programmes. The next question will ask if they are an EU, non-EU (or partner) school. This will inform evaluators of which type of certificate the applicant is applying for.

The EU and non-EU schools will have the same application form. Partner schools will have a different, shorter form with a list of "services" they provide, and they should be included in the partner search subpage.

2.3.3 Exemption for ProBleu schools

Following discussion with EMSEA, ProBleu is developing an agreement that enables all ProBleu-funded schools to be automatically accredited as Blue Schools within the NEBS. ProBleu applicants that reached the evaluation minimum threshold but were not funded will also be offered a shorter accreditation process for the NEBS. Instead of completing a full NEBS application, they only need to demonstrate that they have started the project described in their ProBleu application. ProBleu thus brings two advantages to schools: the funding to kickstart their improved curriculum and a streamlined NEBS certification.

3. Review methodology

This report presents an analysis, review, and evaluation of current and past Blue School projects undertaken by NEBS-accredited schools. The review process provides insights into the types of projects implemented and the resources produced. The aim of this analysis is to enable ProBleu to identify areas for improvement when assisting new projects and to prioritise resource development efforts to better support schools and enhance future project impact. Whilst descriptions of NEBS projects are available from the Maritime Forum website [<https://maritime-forum.ec.europa.eu/blue-school-member-en>], that catalogue can be complex to navigate to find relevant information. In this deliverable, projects have been selected for review based on geographical diversity and the amount of information available about each project (see [Section 3.1](#)). The 'project evaluation dataset' (see Excel file "ProBleu - D2.2 project evaluation dataset 2024_05_21" in the deliverable package) provides this selection of Blue

School projects (see [Section 3.1](#)). The projects in this deliverable can serve as a helpful starting point for teachers and schools interested in joining the NEBS. The reduced list focuses on projects with the most information. Teachers can review projects from other schools and resulting resources to gain inspiration for their own projects, and to gain a deeper understanding of what joining the NEBS entails. The selection process prioritised geographical coverage to ensure at least one project from each country with Blue Schools, providing an example for other schools in that country looking to join the NEBS. This geographical coverage is significant due to the local language in which the projects are developed. For instance, if a French school is looking to join the NEBS, it can find a project example in French to gain inspiration for its own project.

3.1 The selection process

As of March 2024, approximately 400 Blue Schools were certified by EMSEA as members of the NEBS. For this report, a selection of projects was made according to the following criteria:

- A maximum of three school projects from any country were reviewed.
- Schools were selected if they included a URL to more project information.
- Where no working URLs were present or if there were more than three schools in a country, it was ensured that projects:
 - were selected from different geographies (coastal/inland);
 - covered a variety of themes / focus areas (see Table 1).

This selection process resulted in a total of 67 projects from 27 countries being reviewed.

3.2 The review

All Blue School project information is stored on the Maritime Forum website [<https://maritime-forum.ec.europa.eu/blue-school-member-en>] created by EMSEA. This information might include links to additional material or to a project webpage. In ProBleu, existing and novel descriptors have been used to classify and evaluate each selected project. Each descriptor has a type and a set of possible values (expressed in the form of question and answer). Table 1 outlines the descriptors used, along with the associated type and values. In addition, a spreadsheet was created (see Excel file “ProBleu - D2.2 project evaluation dataset 2024_05_21” in the deliverable package) to collect the result of this analysis. Two sources were used to ascertain the information required for the review: the Maritime Forum website [<https://maritime-forum.ec.europa.eu/blue-school-member-en>], which contains school and project information, and a database provided by EMSEA which contains the answers from the application form of each project.

This review involved evaluating the projects against several criteria (see the 'Descriptor name' column in Table 1), some of which were defined within ProBleu.

A criterion of particular relevance is the presence of resources produced and shared as part of the school project. Up to two resources were identified for each project, and links to these were included wherever they were made accessible (see descriptor name “Resource” in Table

1). A project URL was also recorded if this was provided (see descriptor name “Resource URL” in Table 1).

In Blue Schools, ocean and water literacy is commonly developed using a project-based learning methodology (Kokotsaki *et al.*, 2016). From the analysis of Blue Schools’ projects, three common approaches to project-based learning emerged (see descriptor name “Learning approach” in Table 1):

- ‘action and inquiry’, which can be related to the inquiry approach to learning (Pedaste *et al.*, 2015) - typical of an experimental project, based on learning through investigating;
- ‘collaboration and community engagement’, which can be related to the collaborative approach (Laal and Laal, 2012) - typical of a collaborative project, focusing on community engagement; and
- ‘creative and play-based approach’, which can be related to creative learning (Gajda *et al.*, 2017) - typical of a creative project incorporating any type of artistic or play-based activities.

These three categories are not mutually exclusive; hence, any combination could be selected.

Project engagement and participation were assessed against specific criteria to determine if they were high, medium, or low (see descriptor name “Engagement and participation” in Table 1):

- High: The project involved the wider school community¹, the school, and other external organisations at a high level.
- Medium: Students were well involved in activities, but there was no or a low level of community engagement.
- Low: Poor engagement strategies for school students and no community engagement.

Each project was also evaluated for its impact, identifying the impact as long- or short-term. This was decided against the following criteria:

- Long-term – The project had a transformational impact involving sustained knowledge and behaviour change. It empowered changemakers and promoted career aspirations. There was lasting community engagement and influence on policies.
- Short-term – The impact of the project is limited to the duration of the project.

Another aspect of the review assessed the scalability of the project, split into nine criteria influenced by previous work in citizen science by Maccani *et al.* (2020) and described in more detail in Table 1:

¹ The wider school community includes parents, NGOs, and other social partners. The wider school community involvement can take several forms within a project. Apart from being a target of extended actions to improve ocean and water literacy, it can be engaged as potential sponsors of events, helping to communicate activities as widely as possible. Social partners can also be part of a user-centred design process, helping to ensure that support tools assist environmental education in fully realising its potential to bridge the gap between science and society.

- impact on the SDGs;
- ease of understanding and replication;
- openness;
- narrative and communication;
- knowledge and resource sharing;
- champions;
- community engagement;
- financial sustainability;
- political support.

Table 1 - Outline of the descriptors used to review each project selected, along with their type and values (in blue is what has been defined in ProBleu)

Descriptor name	Question and answer (values)	Description and example	Source
Project title	What is the name of the project? [Free text]	E.g., Clean Danube Clean Black Sea	EMSEA database
Country	What country is the school based in? [Country name]	E.g., Austria	EMSEA database
Date	What are the start and end years of the project? [Year range]	E.g., 2021-2022	EMSEA database
School	What is the official name of the school coordinating the project? [Free text]	E.g., Vienna Bilingual School	EMSEA database
Category	What are the themes of the project? <ul style="list-style-type: none"> ● Biodiversity ● Climate and ocean ● Maritime culture ● Ecoschools ● Food from the ocean ● Healthy ocean ● Clean ocean 	The ocean- and water-related themes the project involves. More than one can be selected (e.g., Healthy ocean, Biodiversity)	Maritime Forum website and EMSEA database
School level	What are the types or levels of the school involved in the project? <ul style="list-style-type: none"> ● Kindergarten ● Primary school ● Middle school ● Secondary school 	More than one can be selected (e.g., Primary school, Secondary school)	EMSEA database

	<ul style="list-style-type: none"> • Junior high school • Senior high school • Vocational school 		
Resource	What are the types of resources that have been created by the project? <ul style="list-style-type: none"> • Artwork/performance • Exhibition • Flyer/poster • Podcast • Presentation • Document • Publication • Social media • Software • Teaching material • Video • Website • Workshop 	More than one can be selected (e.g., Video, Artwork/performance)	ProBleu
Resource URL	What is the location of the resources? [Web address]	E.g., [www.sogetinformed.com]	EMSEA database
Resource accessibility	Is the resource accessible? [Yes/No]	The web address is working and contains the resource.	ProBleu
Learning approach	Which of the following learning approaches are adopted by the project? <ul style="list-style-type: none"> • Action and inquiry • Collaboration and community engagement • Creative and play-based approach 	Describes the learning approaches adopted by the project to achieve the teaching and learning goals (more than one can be selected) (e.g., Action and inquiry, Collaboration and community engagement).	ProBleu
Engagement and participation	To what extent does the project achieve engagement and participation? <ul style="list-style-type: none"> • High • Medium • Low 	Level of engagement the project achieved, both within the school and the wider community (e.g., Medium)	ProBleu
Impact	What is the potential impact of the project? <ul style="list-style-type: none"> • Long term • Short term 	Long-term example: <ul style="list-style-type: none"> • The project's activities are fully integrated into the school curriculum, and are repeated over 	ProBleu

		<p>several years, including sustained engagement with the wider community.</p> <p>Short-term example:</p> <ul style="list-style-type: none"> The project investigates a variety of marine conservation issues; students present their findings in school, and a one-off exhibition is held to engage the wider community. 	
Scalability assessment			
Impact on the SDGs	<p>Does the project have an impact on the SDGs?</p> <ul style="list-style-type: none"> Yes No or N/A 	Identifies if the project directly or indirectly addresses any of the 17 SDGs (see Section 4.2.4 Scalability for more details).	ProBleu
Ease of understanding and replication	<p>Are the project details clearly described?</p> <ul style="list-style-type: none"> Yes No N/A 	Identifies whether the project is clearly described for easier replication by others.	ProBleu
Openness (open data)	<p>Are data produced by the project shared openly?</p> <ul style="list-style-type: none"> Yes No N/A 	Identifies if the project directly mentions the intention to be open, or have open-data procedures in place.	ProBleu
Narrative and communication	<p>Has the project carried out communication and dissemination activities?</p> <ul style="list-style-type: none"> Yes No N/A 	Identifies if the project has been communicated and disseminated.	ProBleu
Knowledge and resource sharing	<p>Are resources developed in the project openly accessible for reuse?</p> <ul style="list-style-type: none"> Yes No N/A 	Identifies if the project includes openly accessible resources that were produced during the project.	ProBleu
Champions	<p>Does the project assign a school or community member as a champion?</p> <ul style="list-style-type: none"> Yes 	A champion plays a vital role in promoting and supporting the project initiatives, with responsibilities in the following	ProBleu

	<ul style="list-style-type: none"> • No • N/A 	areas: advocacy and awareness, project support and collaboration, community building and engagement, and sharing knowledge and best practices.	
Community engagement	Does the project engage with the wider community outside of the school? <ul style="list-style-type: none"> • Yes • No • N/A 	Identifies if the project engages with the wider community outside of the school and its members.	ProBleu
Financial sustainability	Does the project achieve financial sustainability? <ul style="list-style-type: none"> • Yes • No • N/A 	Identifies if the project mentions specific fundraising for their project which will make it financially sustainable.	ProBleu
Political support	Does the project have political support? <ul style="list-style-type: none"> • Yes • No • N/A 	Identifies if the project mentions any political support, or involvement in policy decisions and actions.	ProBleu

4. A review of existing Blue Schools

4.1 Current distribution of Blue Schools

There are approximately 400 schools that have been certified by the NEBS since the beginning of the programme. The projects range across 27 countries (mainly EU and Associated Countries), and the number of Blue Schools in each country can be seen in Figure 1. There is a high representation of Spanish schools in the NEBS but an overall good spread of the level of education of schools in the Network (Figure 2), which highlights that information regarding the NEBS is reaching and appealing to a large diversity of schools. Blue School projects need to be developed within the school teaching-curriculum, and there are different levels of flexibility in the teaching curriculum between countries. Accreditation in the NEBS may see a much slower uptake when the curriculum is strictly defined at the national level and does not include *blue schooling*. The uptake would then rapidly accelerate once the national approach switches to *blue schooling* (if schools are still interested in accreditation at that point).

Schools have carried out their projects in both coastal and inland environments (Figure 3). EMSEA used the definition of a coastal region as being less than 20km from the sea and the definition of an inland region as more than 20km from the sea. While a significantly higher number of schools conducted their project in coastal regions, a quarter have carried out their

projects in inland waters. Historically, the NEBS was focused on the marine environment, and only recently extended to freshwater systems, which explains the limited number of schools working in inland waters.

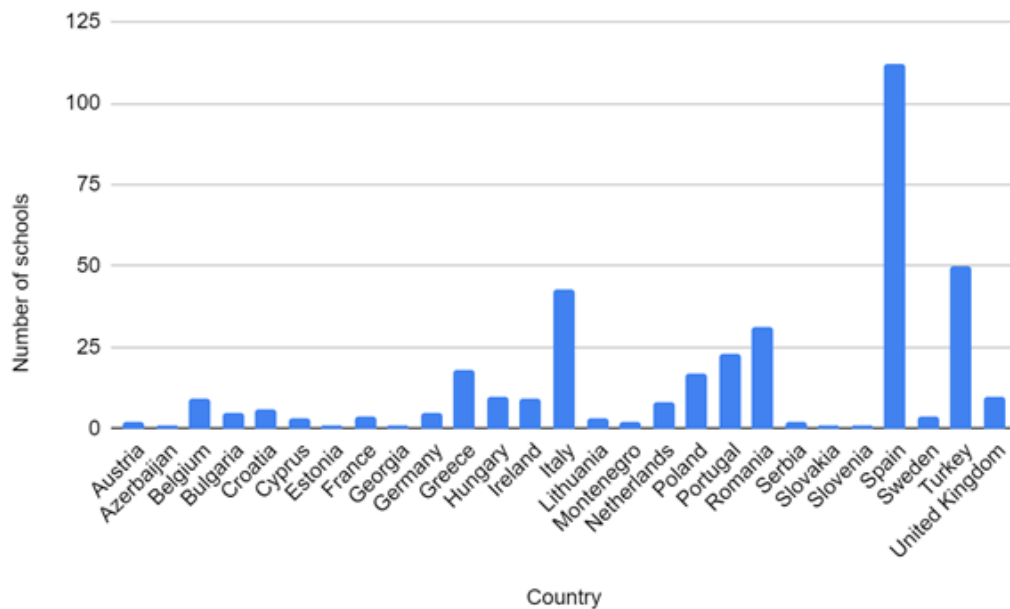


Figure 1 - Number of projects per country certified by the NEBS.

School level

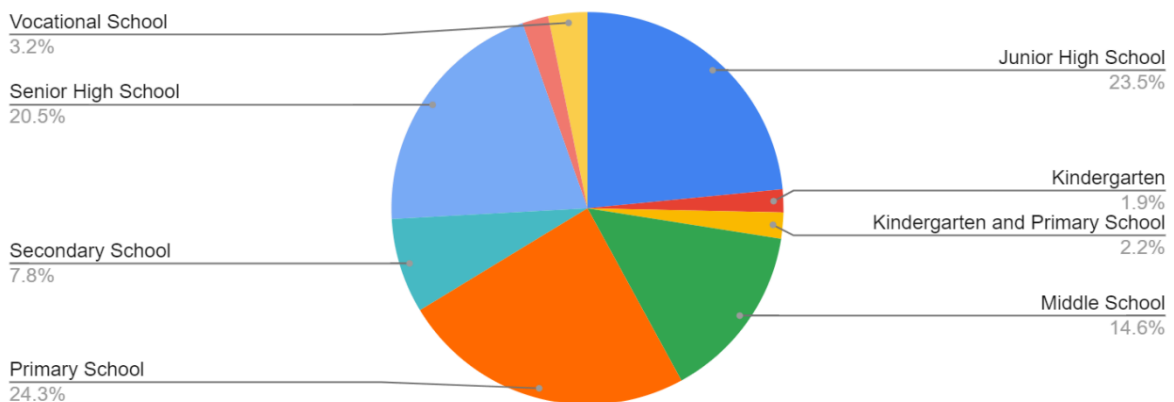


Figure 2 - School level of the total 400 schools certified by the NEBS.

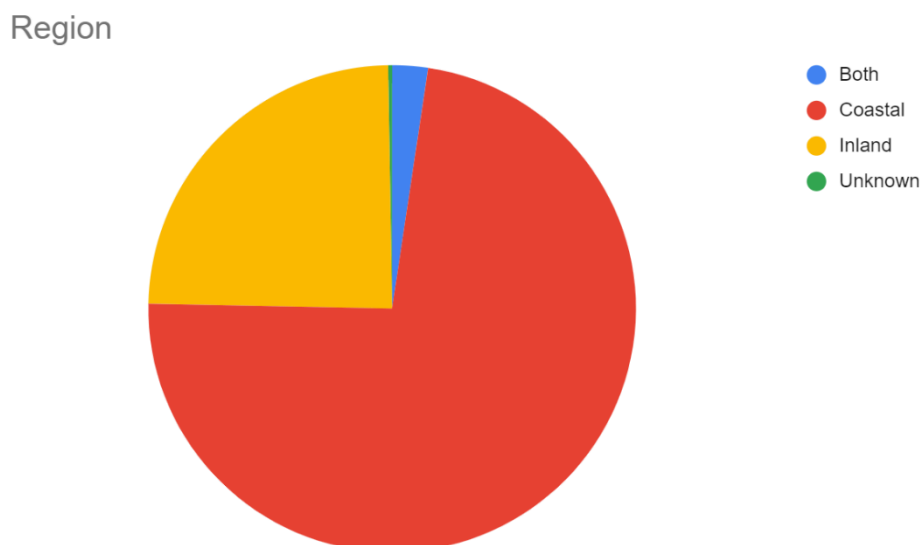


Figure 3 - Region (coastal/inland) of the schools that have been certified by the NEBS.

4.1.1 Validity of NEBS certification

Currently, accreditation to the NEBS lasts a single year. There is ongoing discussion around increasing this period to three or five years, or even longer. This may help incentivise schools to join the NEBS by fostering a more sustained and valued relationship with the Network.

4.2 Review results

The review of 67 school projects was conducted using all available information, which in the case of some projects was very limited. This means that some projects may have met certain criteria, such as community engagement or political support, but without evidence or explicit mention of what was done, these criteria cannot be confirmed. In some cases, there was a lack of information regarding the results and impact on the school and the community post-project.

4.2.1 Learning approaches

The review carried out in the project evaluation dataset (see the Excel file “ProBleu - D2.2 project evaluation dataset 2024_05_21” in the deliverable package) revealed that 91% of schools incorporated more than one learning approach, showing good variety within projects (Figure 4). Overall, teachers implemented the projects across numerous year groups within a given school, integrating it across the curricula and using multiple learning approaches. This will help engage a wide variety of students, whether they are more scientifically or creatively minded.

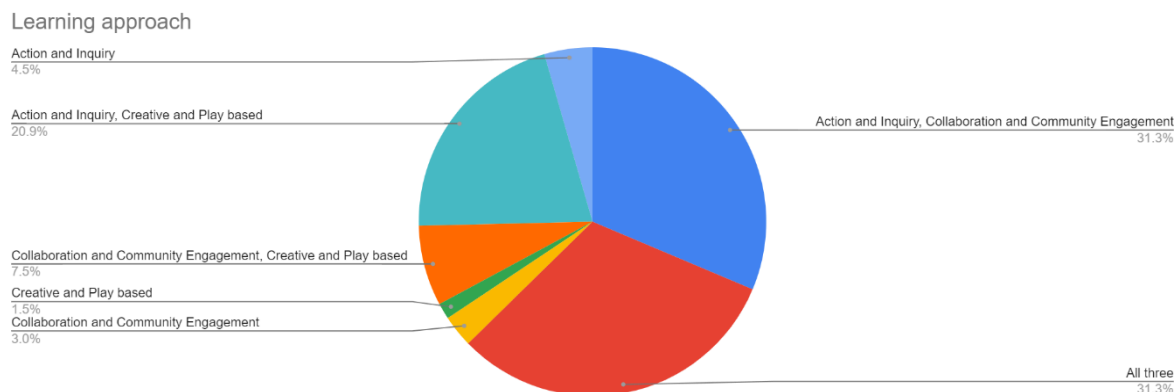


Figure 4 - Learning approaches used by the 67 NEBS projects selected for review.

4.2.2 Impact

Only 30% of projects were assessed as evidencing long-term impact (Figure 5). Projects with predominantly short-term impact (70%) could still have been highly successful in raising awareness and understanding of environmental issues, while lacking a planned transformational aspect of sustained behaviour change or impact on policy.

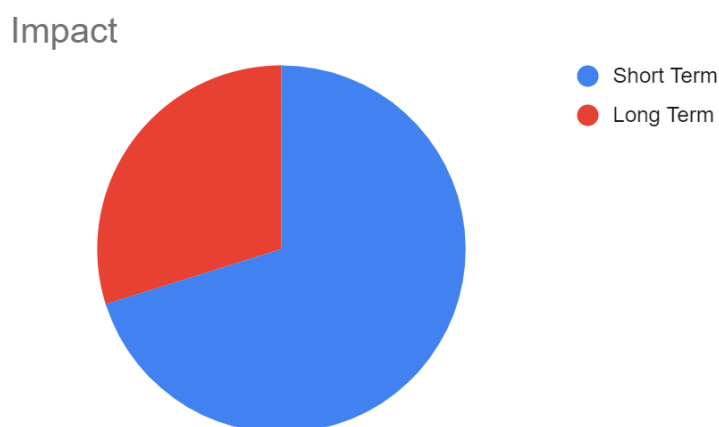


Figure 5 - Potential impact of the 67 NEBS projects selected for review

4.2.3 Engagement and participation

The majority of reviewed projects (60%) achieved high engagement and participation (Figure 6). Many projects engaged students across the school in a variety of subjects and got them involved with external organisations.

Engagement and participation

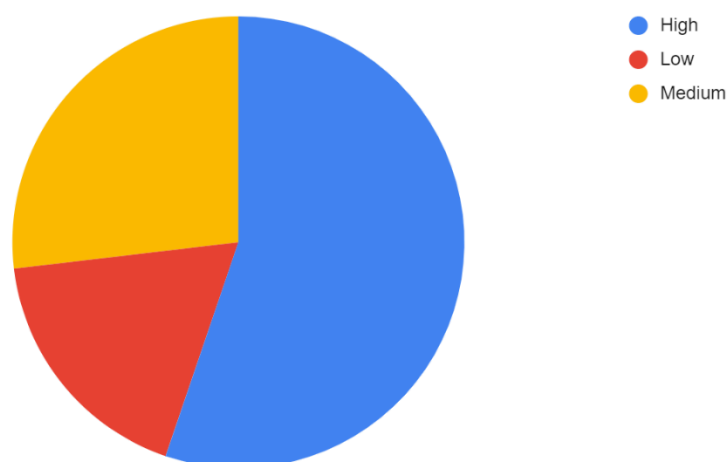


Figure 6 - Engagement and participation levels of the 67 Network of European Blue Schools (NEBS) projects selected for review.

4.2.4 Scalability

In terms of scalability, projects were assessed against the nine aforementioned categories (see Section 3.2). Because the project descriptions were not optimised for the scalability assessment some categories, such as champions and financial sustainability, were not addressed in the information provided. The scalability assessment categories will nevertheless be useful to plan future projects. The results of the scalability assessment are presented below.

Impact on SDGs - Due to their implicit nature, all projects achieved impact on the SDGs. They address SDG 4, Quality Education (specifically SDG 4.7), SDG 14, Life Below Water, or SDG 6, Clean Water and Sanitation. In the future, there could be a need for a more in-depth analysis as to whether projects are making a conscious effort to address the SDGs.

Ease of understanding and replication - 70% of projects achieved ease of understanding and replication, meaning they were well described to the point where another teacher could replicate the project in their school.

Openness - 5% of projects achieved openness through sharing their gathered data; this also means that another school, which perhaps does not have direct access to a water body, could use the data.

Narrative and communication - 50% of projects had clear dissemination pathways either through social media, webpages, or in-person activities.

Knowledge-sharing and transfer resources - 40% of projects shared their resources from their projects online.

Champions - No project specifically mentioned the formation of champions. Not enough data were collected from the projects about this aspect. This area may be beneficial to gain data about in the future.

Community engagement - 70% of projects incorporated engagement with the wider community outside of the school.

Financial sustainability – No project addressed aspects of financial sustainability. This highlights another potential data gap that may be beneficial to gain data about in the future.

Political support - One of the selected projects mentioned political support, in the form of support from their local mayor's office. Other projects may have political support, but it was not mentioned.

These results (Figure 7) allow us to see that the majority of projects are understandable and replicable (70%), and involve some aspect of the community outside of the school in the project (70%). *Knowledge-sharing and transfer of resources*, and *narrative and communication*, were achieved distinctly less frequently, at 40% and 50% of projects respectively meeting these criteria. These two weaker criteria commonly involve the use of information technology skills, as this is an important element in the tools used to disseminate project information and results either via a school website, project webpage or social media. Information technology skills are also required in sharing resources via the same platforms. A proposed reason for less projects meeting these criteria is that teachers may not be confident in undertaking these tasks and would benefit from additional support in relation to information technology (Donert *et al.*, 2015), or that they are focusing their time and efforts on carrying out the project in person and do not see sharing materials as a priority. Identifying this as a potential weakness means more emphasis can be put on encouraging teachers to carry out this aspect of their projects, and attention can be drawn to the benefits it can have, especially in terms of replicability by other schools. A potential solution could be to encourage students to share their own resources on a predetermined platform. Depending on the age of students, they may be able to design a project webpage themselves. A further solution involves the development of a community of teaching practice which will allow teachers to communicate directly, the ProBleu platform, which is in development, can be used to support such a community, and encourage teachers to share their results and resources online.

Potential data gaps were identified in the information provided by schools regarding *financial sustainability* and using *champions*. It may be beneficial to ask schools to address these two points in future; this will give better insight into project sustainability and impact, and encourage teachers to think about project sustainability at an early stage in project design. Significant impact is generally associated with sustained actions. In the NEBS and ProBleu, schools are encouraged to make their project financially sustainable so that skills and knowledge can be retained and used regularly, and any equipment can be used repeatedly.

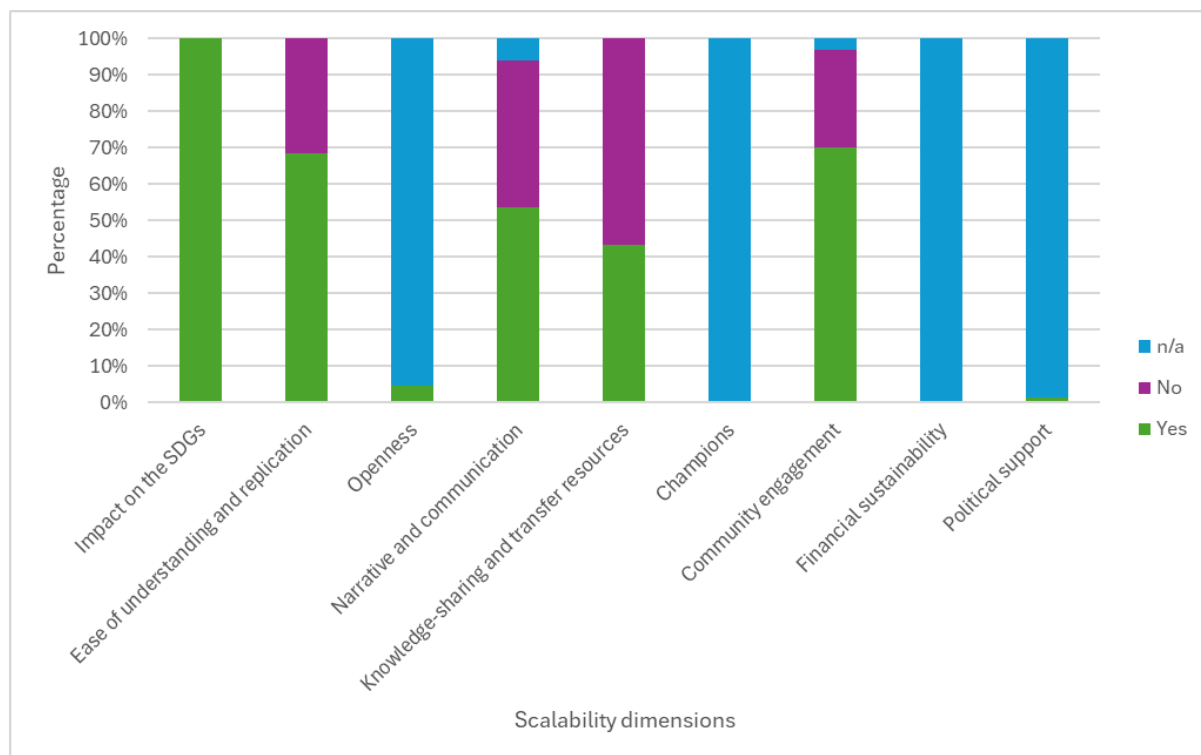


Figure 7 - Scalability dimensions achieved by the 67 NEBS projects selected for review

5. A review of teaching resources

Many projects provided useful resources that could be viewed either through the Maritime Forum website, the school website, or a separate website designed for the project. However, there were also numerous instances where links were no longer functional, which meant the resources could not be accessed. Some projects also included links to their ‘twinning’ website, where a group of schools participating in the same project had posted their contributions.

50% of reviewed projects provided at least one resource that could be accessed; however, the majority of these resources are artwork/performances (13%), presentations (13%), videos (12%), and flyers/posters (10%). Only 3% of given resources are teaching material/courses (Figure 8). From the perspective of growing NEBS, teaching material/courses are particularly desirable because they give opportunities to reduce planning and preparation time for teachers elsewhere. However, all resources allow teachers to gain ideas and inspiration from these projects should they wish to replicate the resources in their school.

Resources

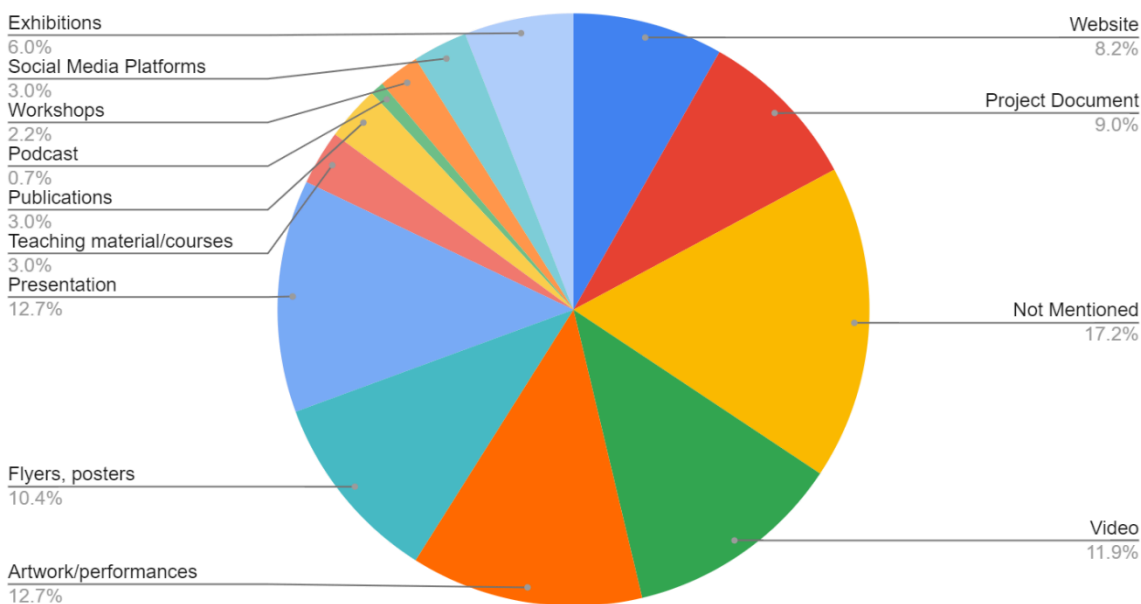


Figure 8 - Resources produced by the 67 Network of NEBS projects selected for review

6. Next steps

For this evaluation to reach its desired purpose, the project evaluation dataset (see the Excel file “ProBleu - D2.2 project evaluation dataset 2024_05_21” in the deliverable package), or at least a condensed version which includes details of the project and links to the associated resources produced, should be shared with teachers interested in joining the NEBS. Discussions will take place with EMSEA as to where this document could be most helpful, for example on the Maritime Forum website.

6.1 Standardisation

The NEBS is one of several growing networks aiming to improve ocean and water literacy through schools. Other networks include the *All-Atlantic Blue Schools Network (AA-BSN)* [<https://allatlanticblueschools.com/>], which has 18 participating countries situated around the Atlantic Ocean. There are a number of overlapping countries between the NEBS and the AA-BSN, such as France, Ireland, Portugal, and the UK. There is an opportunity to homogenise the networks for consistency in approaches and evaluation of impact. This will allow for a more comprehensive understanding of the current status of ocean and water literacy within schools, as well as more effective dissemination of knowledge, best practices, and resources globally. The Blue School Global Network is currently being developed by UNESCO, following a survey of Blue School national coordinators (Annex 2). This aims to gain a greater understanding of the networks in order to agree on certain criteria to be used in standardised Blue School project evaluations, for example.

7. Conclusions

The Network of European Blue Schools is successfully engaging schools from various levels of education and from a diversity of countries in carrying out projects to become certified as Blue Schools. This report reviews a selection of projects that have been certified by the NEBS. As observed from the reviewed projects, many showed evidence of high levels of engagement and participation from the school and the wider community. Overall, this document identifies a positive impact of the reviewed projects, particularly in the areas of *community engagement* and *ease of understanding and replication*. Two potential weak areas were identified in *knowledge-sharing and transfer of resources*, as well as *narrative and communication*. Since sharing resources and communication are often computer-based tasks, there may be a correlation here. Therefore, information technology should receive increased focus, and the ProBleu platform can support a community of teaching practices and encourage teachers to share their results and resources online. ProBleu proactively supports schools in sharing knowledge and resources widely and increasing their engagement when current support structures are financially unviable. Finally, applicants to the NEBS and ProBleu are encouraged to consider, in the design phase of their projects, all the criteria defined in this report to evaluate impact and scalability.

References

Donert, K., Fauville, G., Gotensparre, S., Mäkitalo, Å., Van Medegael, L., Zwartjes, L., (2015). Review of marine formal education. EU Sea Change Project. Retrieved from [<https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5a4442b79&appId=PPGMS>] on 30 May 2024.

European Commission, Directorate-General for Research and Innovation (2020) Mission Starfish 2030: restore our ocean and waters, Luxembourg: Publications Office of the European Union. Retrieved from [<https://data.europa.eu/doi/10.2777/70828>] on 30 May 2024.

Gajda, A., Beghetto, R. A., & Karwowski, M. (2017). Exploring creative learning in the classroom: A multi-method approach. *Thinking Skills and Creativity*, 24, 250-267.

Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving schools*, 19(3), 267-277.

Laal, M., & Laal, M. (2012). Collaborative learning: what is it? *Procedia-Social and Behavioral Sciences*, 31, 491-495.

Maccani, G., Goossensen, M., Righi, V., Creus, J. and Balestrini, M., 2020. Scaling up citizen science: What are the factors associated with increased reach and how to lever them to achieve impact. Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-25157-6, doi:10.2760/00926, JRC122219. Retrieved from [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC122219/jrc122219_citizen_science_scaling_-_final_-_pdf_version.pdf] on 30 May 2024.

McKinley, E., Burdon, D., & Shellock, R. J. (2023). The evolution of ocean literacy: A new framework for the United Nations Ocean Decade and beyond. *Marine Pollution Bulletin*, 186, 114467.

National Oceanic and Atmospheric Administration (NOAA). (2013). *Ocean Literacy. The Essential Principles and Fundamental Concepts of Ocean Sciences for Learners of All Ages (version 2)*. NMEA Special Report. Retrieved from: [http://oceanservice.noaa.gov/education/literacy/ocean_literacy.pdf] on 30 May 2024

Pedaste, M., Mäeots, M., Siiman, L. A., De Jong, T., Van Riesen, S. A., Kamp, E. T., ... & Tsourlidaki, E. (2015). Phases of inquiry-based learning: Definitions and the inquiry cycle. *Educational research review*, 14, 47-61.

Woods, S., Parkinson, S., Sprinks, J. & Ceccaroni, L. (2023). *ProBleu pipeline for Blue Schools*. Deliverable D2.1 EU Horizon Europe ProBleu Project, Grant agreement No. 101113001

Annex 1 - NEBS application

The application to join the NEBS is hosted in a Microsoft Form, which has been used since September 2023 [URL to the form: <https://forms.office.com/e/vRE6YOp6Lv>]. The application has been copied below (accessed May 2024).

Application to become a European Blue School (Spring semester 2024)

Dear teacher,

Welcome to the application process to turn your school into a European Blue School.

Please provide us below with detailed information on the project developed and conducted by your students. Your application will be reviewed by the coordinating team of the Network of European Blue Schools and you will be further contacted.

Teacher

First name of applicant teacher Enter name

Last name of applicant teacher Enter name

E-Mail of applicant teacher Click here to enter text.

School level

- Kindergarten
- Primary school
- Middle school
- Secondary school
- Technical school
- Vocational school

How many students are directly involved in the project? Click here to enter text.

School

Name of school

Click here to enter text.

Country

Click here to enter text.

City

Click here to enter text.

Website URL of School

Click here to enter text.

Coastal (<20 km inshore)/Inland location:

Coastal Inland

Sea basin:

 Atlantic Ocean Baltic Sea Black Sea Mediterranean Sea North Sea

GPS coordinates of the city

Participating EU Blue Schools will be featured in an interactive map. We kindly ask you to provide the coordinates for the city in which your school is based in. You can use online tools to find your coordinates, i.e. www.latlong.net

Latitude

Click here to enter text.

Correct format: i.e. 52.520008

Longitude

Click here to enter text.

Correct format: i.e. 13.404954

The Blue Project

Name of the project (*English*)

Click here to enter text.

Name of the project (*native language*)

Click here to enter text.

URL(s) of the project (*if applicable*)

Click here to enter text.

Compliance with the European Blue Schools Criteria

Develop a project with interlinked activities* - A project consists of several complementary activities under the umbrella of one central topic, e.g. the students learn about the ocean, perform activities in the field, do art or lab activities, present their work.

 Yes No

Produce a clear output* - The initiative encourages students to be active learners and develop a product, object, event or service that can be exhibited or used as a tool for communication.

 Yes No

Involve all students* - Students play an active role in all phases of the project. Not all student in from school have to be involved in the project, but each student involved in it has to actively partake in the project activities.

- Yes
 No

Collaborate with a local partner* - Collaborative work is key to success. Invite an expert, marine scientist, NGO, science centre, maritime company and/or government body to help facilitate the creation, implementation and communication of the project. **Go to the [EU4Ocean Platform members](#) to find a partner!**

- Yes
 No

Identify the partners involved in the project*

e.g. local companies, municipalities, NGOs, other schools, museums, science centres, universities...

[Click here](#) to enter text.

Communicate to the community* - Let students improve their communication skills and feel more engaged with their local community by talking about the project in a meaningful and informed way, starting with their own social environment, e.g.

- Yes
 No

Identify the communication actions of the project*

e.g. creating an object, presenting a play, making a short documentary, writing an article for the school website, creating a social media campaign, etc.

[Click here](#) to enter text.

Provide authentic learning experiences - Provide the students with opportunities to *Find the Blue* both in the classroom and in real-life settings. This initiative allows pupils to apply what they learned in class in hands-on projects with real-life relevance and impact.

- Yes
 No

Work in a multi-disciplinary manner - Explore your topic through many school subjects, allowing access for students with different strengths, viewpoints, and interests. Multi-disciplinary projects provide learning opportunities beyond science. You can incorporate aspects of e.g. languages, history, (water) sport, art, or economy.

- Yes
 No

Mobilise beyond the classroom - This initiative allows you to move beyond your classroom by offering opportunities for collaboration among teachers of different disciplines, diverse age groups, and numerous subjects. The project creates an opportunity to work as a school, and not just a class.

- Yes

No

Foster a land-sea interaction - Schools from coastal areas are invited to collaborate with inland schools to exchange experiences and information on the differences and similarities they observe in their environments, economies, or culture. Cooperation is facilitated via eTwinning.

 Yes No

Bring in a European dimension - This initiative facilitates cultural exchange amongst European schools, allowing students to see themselves and their work in a European context and collaborate with peers from across the Union. The initiative offers the opportunity to connect with different partner schools via eTwinning, travel abroad via a funded exchange programme, or develop more permanent collaborations.

 Yes No

Summary of the project

- In the summary, please tell us how your students are finding their blue link to the ocean. Use the following questions to prepare your summary:

- What are the objectives of the project?
- What are the students working on? (topic)
- What is their approach? (activities and output)
- How are the students involved?

[Click here to enter text.](#)

Starting date of the project

Please input date.

End date of the project

Please input date.

Is the project linked to school curricula?

 Yes No

If yes, to which subjects is it connected to?

[Click here to enter text.](#)

Is the project being developed in any other kind of school programme/certification? If so, please specify:

 Escola Azul

- Aires Marines Educatives
- Ecoschools
- Green schools
- Blue Flag
- Biophare Shule
- Climate Action Project
- IOC UNESCO

Does the project address one of the following topics?

- Healthy Ocean
- Food from the Ocean
- Ocean and Climate
- Biodiversity
- Maritime Culture
- Other, please specify: [Click here to enter text.](#)

Participant consent for storage and future use of data

- By submitting this form, I agree that the organisers*** of the EU4Ocean coalition will collect, store and process my data for the purpose of organising and maintaining the Network of European Blue Schools.
- I agree to be contacted by email about my membership, my project submission, and other enquiries related to the Network of European Blue Schools.
- I agree that my personal information (name, photo, country, description, interests) as well as information about my project (title, description, topics, URLs, logo, and other uploaded attachments) will be published on the European Blue Schools website
- I agree that my personal information (name) as well as information about my project (title, description, topics, URL, logo, and other uploaded attachments) will be published on the Network of European Blue Schools public website.
- I certify that I either own all copyrights or have obtained the permission from copyright owners of the articles, news reports, photos, music, videos or other copyrighted material that I have uploaded on the Network of European Blue Schools.
- I certify that I have obtained a signed authorisation by the individuals who can be recognised in the visual material that I have uploaded in my application.
- I understand that by uploading my texts, photos, videos or other material, I retain full copyright of them.
- By submitting this form, I grant the European Commission and the organisers of the EU4Ocean Coalition*** a non-exclusive, royalty-free, worldwide license to use, store and publish the texts, photos or other material to communicate to the public for non-commercial purposes.

Participant code of conduct

We want the Network of European Blue Schools to be a friendly experience. Therefore, by engaging with the Network of European Blue Schools, you agree to abide by this Code of Conduct.

Members

- Must be respectful to other members, even if they disagree with them;
- Must not send offensive or harassing material to other members;
- Must not undertake deliberate activities that undermine the purpose of the Network of European Blue Schools or of other members.

All entries and contributions

- Must not plagiarise and violate copyright, privacy, trademark, database, personal or proprietary rights of any kind;
- Must not contain unlawful, harassing, threatening, violent, defamatory, obscene, abusive, hateful, racially offensive, sexually offensive, religiously offensive content and knowingly false material about other members, any person or entity;
- Must not reveal confidential information;
- Must not contain unsuitable or irrelevant website addresses and URLs;
- Must not promote illegal behaviour;
- Must not involve flooding, spamming or advertising;
- Are all public and may appear in public search results. Therefore, you should not post personal details or information you do not want to be available publicly.

Members who violate this Code of Conduct will be sent a notification message about the removal of the offensive contribution by the Network of European Blue Schools team. Members who repeat offenses after receiving a warning will be banned from the Network of European Blue Schools.

**** EU4Ocean is a project funded by the European Commission and implemented by a consortium of 12 partners across Europe, which includes: ACTeon (coordinator, France), Seascope Belgium (Secretariat of the European Marine Observation and Data Network and the European Atlas of the Seas, Belgium), the European Marine Board (EMB, Belgium), Nausicaá-National Sea Centre (France), the World Ocean Network (WON, France), Ciência Viva (Portugal), the European Marine Science Educators Association (EMSEA, Belgium), Ecologic Institute (Germany), the European Centre for Information on Marine Science and Technology (EurOcean, Portugal), Secretariat of Submariners (S.Pro, Germany), MARE Nostrum (Romania), European Schoolnet (Belgium), and Farah Yasmin Obaidullah (freelance campaigner, founder & director of Women4Oceans, The Netherlands).*

I agree with these terms

Yes

I would like to receive further information on activities of the EU4Ocean coalition, which includes the EU4Ocean Platform and the Youth4Ocean Forum


Yes

No

Annex 2 - Blue School Questionnaire from Blue School Global Network

[URL to the form:

<https://docs.google.com/forms/d/e/1FAIpQLSfV4UemPag98aGCzrEr1q16AI8WvYDuhwCLrQskx7dpRRtvIQ/viewform>]. The questionnaire has been copied below (accessed May 2024).

 <p>OCEAN LITERACY DIALOGUES</p> <p>SURVEY</p> <p>BLUESCHOOLS NATIONAL COORDINATORS</p>
<h3>Blue School Questionnaire</h3>
<p><i>Blue Schools Networks aims to raise Ocean Literacy and citizenship for a sustainable world. The Blue School approach increases awareness about the ocean and inspires students, educators, and citizens from different countries to deepen their connection with the sea. By promoting critical thinking, experiential learning, and community-based projects, students are encouraged and supported to translate their knowledge into positive action to ensure a healthy future ocean.</i></p>
<p><i>This questionnaire seeks to create the state-of-the-art of the existing Blue School networks, identify obstacles and challenges encountered, and collect data to build a common framework for an GlobalInternational Global Blue School Network.</i></p>
<p><i>The estimated time for completing this questionnaire is 15 minutes.</i></p>
<p><i>We thank you in advance for your participation.</i></p>
<p><i>* Indicates required question</i></p>
<p>Email*</p> <p>Your email address</p>
<p><i>Before starting, please indicate your consent to participate. Your contributions will be anonymised.*</i></p> <ul style="list-style-type: none"> <input type="radio"/> I give my consent to participate
<p>Name and Surname *</p> <p>Your answer</p>

1. Please select the country in which you established the Blue Schools network*

- | | |
|---|---|
| <ul style="list-style-type: none"> ● Angola ● Argentina ● Austria ● Azerbaijan ● Belgium ● Brazil ● Bulgaria ● Cape Verde ● Canada ● Croatia ● EUA ● France ● Georgia ● Germany ● Greece ● Honduras ● Ireland ● Italy ● Lithuania ● Morocco ● Mexico | <ul style="list-style-type: none"> ● Namibia ● Netherlands ● Nigeria ● Peru ● Portugal ● UK ● Uruguay ● Romania ● São Tomé and Príncipe ● Serbia ● Slovakia ● Slovenia ● South Africa ● Spain ● Sweden ● Turkey ● African Blue School network ● Atlantic Blue School network ● European Blue Schools network ● Other: |
|---|---|

2. What is the name of the institution(s) responsible(s) for coordinating the Blue School program in your country/region?*

Your answer

3. What type of institution(s) are responsible for the Blue School coordination in your country/region?*

- Education & Community Services
- Government
- Research Centre/University
- Nonprofit / Non-governmental organisation (NGO)
- Science Centre, Aquarium or Museum
- National Network (education, science, Ocean literacy, environmental)
- Other:

4. Your profession/position in the institution?*

Your answer

5. What is your role in coordinating the Blue School program? (select all that apply)*

- I coordinate the implementation of the Blue School program in my country.
- I coordinate the Blue School program in a region spanning multiple countries.
- I am a member of the national coordination team.
- I provide support to teachers.
- I work directly with children.
- I am responsible for establishing the partner network.
- I handle communication for the Blue School program in my country.
- Other:

6. Do you have a budget allocated to the coordination for implementing the Blue School programme (2023/2024) in your country/region? (choose the option from the list)*

- None
- I only have human resources allocated
- Funding from a donor/sponsor
- Funding from the government
- Funding from a project
- Other:

7. What is the country's annual budget for the Blue School program? Please select the range that best represents your budget from the options below for 2023/2024.*

- Less than €10,000
- €10,000 - €50,000
- €50,000 - €100,000
- More than €100,000

8. How many schools have Blue School certification in your country/region (2023/2024)?*

- None
- 1-10 schools
- 11-30 schools
- 30 -100 schools
- 101-300 schools
- More than 301 schools

9. How many teachers participate in the Blue School program during 2023/2024?

- None
- 1-10 teachers
- 11-100 teachers
- 100 -300 teachers
- >300 teachers
- I do not know the answer

10. How many students have been engaged within the scope of the Blue School during 2023/2024?

- None
- <30 students
- 31-200 students
- 201 -1000 students
- >1000 students
- I do not know how to answer

11. Which age groups have been engaged in the scope of the Blue Schools (select all that apply)?

- < 6 years
- 6-10 years
- 11-15 years
- 16-18 years
- I do not know the answer
- none

12. Which subjects or disciplines were used to explore the ocean in schools? (Select all that apply)*

- Arts
- Sports
- Natural Sciences
- Social Sciences
- Languages
- Citizenship
- Extracurricular
- I do not know the answer
- Other:

13. Have you developed training courses (webinars and workshops) to empower Blue School teachers?*

- yes
- No

14. As a national/regional coordinator, did you supervise the school projects?*

- Yes
- No

15. If yes, how did you supervise the schools? (select one or more options)

- Online meetings with Blue School teachers
- School visits
- Administration of questionnaires
- Communication via email
- Activity Reports
- Other:

16. Have you developed additional criteria for the Blue School program?*

- Ys
- No

16 a. If you answer Yes, which additional criteria were established in your country?

Your answer

17. Were the following program goals achieved in your country?*

	Highly achieved	Partially achieved	Not achieved
Explore an ocean-related issue			
Engage the local community.			
Inspire students to become active citizens for ocean sustainability.			
Select a meaningful ocean-related issue to explore			
Use an interdisciplinary approach to explore the ocean.			
Interact with maritime professionals (e.g., scientists, seafarers, surfers, sailors, fishermen)			
Select Blue School ambassadors among students.			
Collaborate with partner institutions.			
Encourage students to communicate about the ocean beyond the school community.			
Connect with other Blue School Networks in the same or different countries."			

18. Consider the following aspects of the Blue School concept to enhance Ocean Literacy in schools. (Choose the more suitable answer for each aspect)*

	Fundamental	Relevant	Incompatible	I do not know

The criteria to become a Blue School				
Commit schools to explore the ocean throughout the school year.				
Introduce Ocean Literacy into curricular activities.				
Stimulate the exchange of experiences, challenges, obstacles, and success stories among Blue Schools.				
The multiplier effect of student knowledge in family contexts				
The leading role of the Blue School coordinator teacher				
The interaction (proximity) between schools and institutions linked to the sea				
Monitoring of schools by the Blue School coordination				
The freedom given to schools to explore the sea according to their local contexts, possibilities, and interests				
Global adequacy of the methodology concerning the objectives of national and international educational policies				

19. From the following activities, please choose the **3** more relevant for the schools.*

- Teacher training (professional development and enhancing teaching methods)
- Internships for students (Valuable for hands-on experience and connecting classroom learning with real-world applications)
- Visits to institutions (Provides insight into different educational environments and fosters networking opportunities)
- Lectures (Offer additional learning opportunities and exposure to experts in several fields)
- Bringing the school closer to the maritime sector (Relevant if the school is situated in a maritime-focused region, promoting career exploration in that sector)
- Workshops (Encourage interactive learning and skill development in specific areas)

Linking schools with existing resources (Enhances access to educational materials, facilities, and partnerships within the community)
 Experimental activities/Practical activities (Promote active learning and critical thinking through hands-on experiences)
 Theatre/cinema/cultural activities (Broaden students' cultural awareness and creativity through artistic expression)
 Volunteering actions with the school community (Instill a sense of social responsibility and civic engagement among students)
 Artistic expressions & sports (Foster holistic development and promote physical and creative skills)
 I do not know.
 Other:

20. Which are the **most important** partners for Blue Schools in your country?

Please select the **3** more relevant.*

- Families
- Local community
- Local governments
- Regional governments
- National governments and/or international governing bodies
- Industry and private companies
- Environmental and conservation organisations
- Indigenous governments, organisations
- Researchers, universities, and educational institutions
- Cultural institutions (museums/aquariums, etc.)
- Press/Media
- I do not know
- Other:

21. Please consider the following potential barriers to implementing the Blue School program. Select the option that best applies to your situation for each example.*

	It's a critical barrier	It's a significant barrier	It's a minor barrier	It's not a barrier
challenges in engaging schools and teachers in the Blue School initiative				
difficulty in articulating OL initiatives with curricular				

programs				
financial constraints as a barrier to executing activities or facilitating transportation.				
Teacher time constraints as an obstacle to the implementation of the Blue School project				
the necessity of endorsement from governmental entities responsible for education				
need for teacher training on ocean-related topics				
geographical barriers that limit direct access to the sea				

22. Which Ocean Literacy dimensions are strengthened among students through the Blue Schools initiatives? (select the 6 more important)

Awareness that we are all part of the problems and can be part of the solutions for issues related to the ocean

Greater interest and concern with problems related to the ocean

More reflection on our behaviours and their consequences for the sustainability of the ocean

Transmission of information essential to behaviour change

A greater understanding of our actions' impact on the ocean.

Understand that we sometimes make the right decisions.

Taking a more reasoned position on a specific issue related to the sea

Changing the choices made daily to contribute to protecting the ocean.

Changing habits (e.g., food and type of fish they consume, recycling and reusing materials, making more sustainable and thoughtful decisions, etc.)

Greater willingness and interest in communicating and debating about problems or solutions that we may have for the ocean with friends and family members

Interest in sharing knowledge with others

Willingness and interest in debating issues related to the ocean at a group or community level

Mobilisation of participants in community awareness initiatives

Participation in intervention initiatives and finding applicable solutions for solving real problems

Involvement in active citizenship actions (for example, regular beach cleanings)

Transmission of knowledge and scientifically correct information on ocean topics.

Provide relevant information

Greater empathy for the ocean: Indicates an increased capacity for understanding and sharing the feelings of the sea, fostering a deeper emotional connection and concern for its well-being.

Emotional connectedness: It reflects a sense of emotional attachment and resonance with the ocean, fostering a deeper appreciation for its preservation and conservation.

23. Do the Blue School programs in your country or region use the Ocean Literacy principles or adopt a broader approach by considering multiple perspectives?

(select **one** option from below)*

Ocean Literacy principles (science-based approach)

Ocean Literacy multiperspective approach (holistic vision)

Both

none

Thank you for your collaboration!

Your participation and input will help to inform future enhancements and improvements to global marine education efforts through the Global Blue School initiative!

Please add comments or suggestions

Your answer