



ProBleu

Promoting ocean and water literacy
in school communities

Call HORIZON-MISS-2022-OCEAN-01

Deliverable 6.4

Blue Schools and ocean and freshwater potential future partnership analysis

Lead Beneficiary: Ocean Conservation Trust
Author/s: Stu Higgs

28/11/2025



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.

ProBleu #101113001

Grant agreement No. 101113001

Project acronym: ProBleu

Project full title: Promoting ocean and water literacy in school communities

Start of the project: June 2023

Duration: 36 months

Project coordinator: CSIC

Deliverable title: Blue Schools and ocean and freshwater potential future partnership analysis

Deliverable n°: D6.4

Nature of the deliverable: Report

Dissemination level: Public

WP responsible: WP6

Lead beneficiary: Ocean Conservation Trust

Citation: Higgs, S. (2025). *Blue Schools and ocean and freshwater potential future partnership analysis*. Deliverable D6.4, EU Horizon Europe ProBleu Project, Grant agreement No. 101113001.

Due date of deliverable: Month n°30

Actual submission date: Month n°30

Deliverable status:

Version	Status	Date	Author(s)
1.0	First version	26 November 2025	Stu Higgs Ocean Conservation Trust
1.0	Review	28 November 2025	Luigi Ceccaroni (Earthwatch), Anna Witter (Earthwatch), Eli Bonfill (CSIC), Nicola Bridge (Ocean Conservation Trust)
2.0	Final	28 November 2025	Stu Higgs Ocean Conservation Trust

Table of contents

Table of contents	3
Preface	4
Summary	4
List of abbreviations	4
1. Introduction	5
1.1 Blue Schools.....	5
1.2 The Network of European Blue Schools (NEBS).....	5
1.3 ProBleu.....	6
2. Growing the NEBS: Partnership opportunities	7
2.1 Education networks & partners.....	8
2.1.1 European education networks.....	9
2.1.2 National education networks.....	9
2.1.3 Teacher Associations & Unions.....	10
2.1.4 Observed effectiveness in ProBleu: Local education partners.....	10
2.2 Local project networks & partners.....	11
2.2.1 Environmental NGOs with education programmes.....	11
2.2.2 Marine & freshwater research institutions.....	11
2.2.3 Aquariums, science centres and museums.....	12
2.2.4 Blue economy clusters & coastal authorities.....	12
2.2.5 Observed effectiveness in ProBleu: Local partners & networks.....	13
2.3 Collaboration with EU-level Mission and other blue education projects.....	13
2.4 Prioritisation and selection of partnerships.....	14
2.5 Reciprocal benefits for future partners.....	15
3. Recommendations for potential future partnerships	16
Acknowledgements	17
References	17
Annex 1: Partner priority index	18
Annex 2: ProBleu country application count	19

Preface

Deliverable 6.4 ‘Blue Schools and ocean and freshwater potential future partnership analysis’ is an analytical summary of the work of ProBleu in building a communication and engagement network of partners acting in support of Mission “Restore our Ocean and Waters” by growing the NEBS community. It forms a part of the delivery of WP6 - Communication and Dissemination.

Summary

The development of Blue Schools across Europe has been led by the establishment of the Network of European Blue Schools, which was established in 2020 under the *EU4Ocean Coalition*, supported by the European Commission (DG MARE). The Network aims to develop Ocean Literacy across Europe by connecting formal education institutions with a wide range of real world environmental, scientific, and community based organisations. The resultant project work is used by the network to accredit schools with Blue School status.

In 2022, the EU awarded funding to three projects designed to grow the NEBS by facilitating student projects across the EU - SHORE, BlueLightS and ProBleu. The ProBleu programme has worked with over 114 schools through four public calls. This work has been supported by partners from a wide range of sectors including education networks, science & environmental practitioner networks and communication specialists.

This document has been developed to outline the approach taken by ProBleu in building and utilising appropriate support networks to grow membership of the NEBS. The analysis indicates that partnerships with national education networks, environmental NGOs with education programmes, and aquariums / science centres offer the highest leverage for sustaining NEBS growth beyond ProBleu.

A set of recommendations for continued development of the NEBS based on this experience is included.

List of abbreviations

NEBS - Network of European Blue Schools

DG MARE - Directorate General for the Maritime Affairs and Fisheries

CLIMAREST- Coastal Climate Resilience & Marine Restoration Tools for Arctic Atlantic basin

EAZA - European Association of Zoos & Aquariums

ProBleu #101113001

BIAZA - British & Irish Association of Zoos & Aquariums

EMSEA - European Marine Science Educators Association

1. Introduction

1.1 Blue Schools

At a global level, several definitions exist for the term, 'blue school'. These definitions all broadly describe the existence of a relationship between a formal institute of education and the ocean. In some cases, the relationship is extended to ocean & freshwater. The inclusion of freshwater in this definition is considered an important access point for non-coastal communities to begin engaging with Ocean Literacy and environmental sustainability. Typically, 'Blue Schools' encourage environmental sustainability and incorporate the suggested principles and practices of Ocean Literacy into their curricula and organisational culture.

There are multiple Blue School Networks across the globe. These networks develop their own membership criteria and often provide 'accreditation' and membership status for schools which can evidence how they meet the relevant criteria. Blue School networks exist at National and international scales and in some cases these networks can overlap in geographic terms, allowing schools to hold membership to, or accreditation with, multiple Blue School Networks.

For this analysis, a Blue School is defined as a school which has successfully joined the European Blue School Network, as this network is considered to best align with the Mission "Restore our Ocean and Waters" and the ProBleu mandate at large.

1.2 The Network of European Blue Schools (NEBS)

The Network of European Blue Schools (NEBS) is a pan-European initiative, part of the *EU4Ocean Coalition*, supported by the European Commission (DG MARE), initially established in 2020. Its aim is to bring the ocean (and more broadly, aquatic ecosystems) into classrooms via project-based learning, raising ocean and water literacy in schools of all levels (primary, secondary, vocational).

To become a "European Blue School," a school must submit a project meeting a set of criteria (e.g., involve students, produce a clear output, collaborate with a local partner, communicate results) and is then awarded a certificate

ProBleu #101113001

The NEBS began in 2020 with an initial membership of 40 schools from 12 countries, a figure which has since grown to over 884 schools, in 31 countries as of 2025 (701 in EU countries, 183 in non-EU / associated countries).

This growth has been supported by the work of three EU Mission “Restore our Ocean and Waters” projects: SHORE, BlueLightS and ProBleu.

1.3 ProBleu

ProBleu is an EU-funded Horizon Europe project coordinated by the Institute of Marine Sciences (ICM-CSIC, Barcelona). Its mission is to foster ocean and freshwater literacy in school communities, especially by supporting and expanding the Network of European Blue Schools (NEBS). This aligns with the Mission “Restore our Ocean and Waters” which has the stated goal of restoring the health of the EU's ocean, seas, and waters by 2030. The project emphasizes open schooling, encouraging schools to co-create learning activities with their broader communities (e.g., local stakeholders, scientists) by distributing grants of up to €10,000 to support delivery of projects that last up to 12 months. Schools that receive ProBleu funding and deliver their projects are automatically accredited as European Blue Schools, tying the project directly to growth of the NEBS.

Through the four funding calls issued by ProBleu, a total of 636 project applications were received. Distribution of these applications across Europe is not even, ranging from countries with a single application, to those with over 100. A table with figures for each country is provided in Annex 2. Of these, 114 projects were awarded funding, directly increasing NEBS membership by the same number of schools. As well as this, the ProBleu project has also developed a digital catalogue of freely accessible resources (e.g., teaching aids, citizen science tools) that are freely available to all— helping scale up ocean and water literacy even in schools not directly funded.

The expected impacts of the ProBleu project on Ocean Literacy levels across Europe can be broadly classified under three topics, as outlined in the DoA for ProBleu WP6, as follows:

Scientific impacts

- Funded school projects contributing to protecting marine and freshwater ecosystems and biodiversity and preventing and eliminating pollution
- Ocean and water literacy contributing to preventing pollution

Economic impacts

- Disadvantaged schools able to join the Network through the use of ProBleu resources
- Improved local blue economy through contributions to the Mission objectives

Societal impacts

ProBleu #101113001

- Increased ocean and water literacy in the European population, with individuals and communities behaving more responsibly towards aquatic environments
- Network of Blue Schools ten times larger at the end of the project, with 300 schools using ProBleu resources
- Sustained growth of the Network beyond the end of the project through a concrete sustainability plan

A strong partnership thread throughout the delivery of ProBleu has played a significant role in the achievement of these impacts.

2. Growing the NEBS: Partnership opportunities

Growing the NEBS requires partnerships that support three main themes:

1. Access to education networks & partners
2. Access to local project networks & partners
3. Collaboration with EU-level Mission and other Blue Education Projects

Additional 'enabling partners' should be considered that support elements essential for the growth and sustainability of NEBS, these are:

- a. Funding partners - able to support NEBS with grants or donations
- b. Communications partners - that can provide reach to broad audiences e.g. social media influencers, Ocean Insights Unit @CommsInc

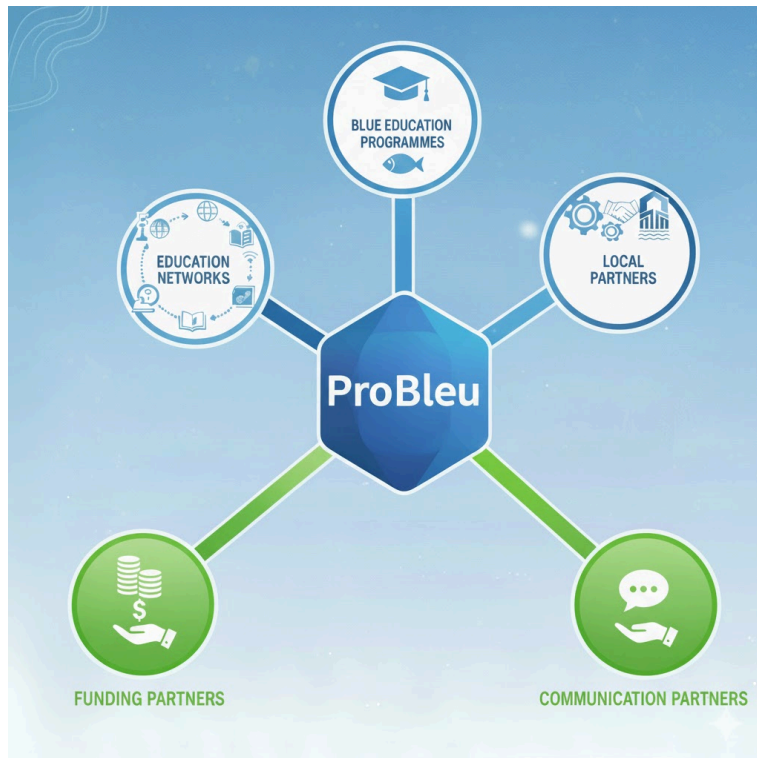


Figure 1: ProBleu Partnership themes

Below is a discussion of each theme, and the key benefits each presented to ProBleu. There follows an overview of the methodology used in ProBleu when determining the prioritisation of potential partnership agreements, and a summary of the key benefits recognised for potential partners in each field.

The findings documented result from the direct experience of the ProBleu delivery model: The four-round, open-call structure to funding application submission provided a comparative sandbox environment through which different partnership and communication strategies could be tested and employed in order to determine the most successful partnership approaches.

2.1 Education networks & partners

The exact number of schools throughout the EU is unknown, however official figures point to an estimated 93.3 million students across the EU in 2020. This presents a practically limitless opportunity to grow the reach of the NEBS in terms of student engagement through formal education institutions.

In order to ensure widespread engagement with the Blue School Network, the benefits of becoming a Blue School must be made clear to academic institutions of all levels. Partnerships

ProBleu #101113001

must be established with organisations, networks, and other bodies that teachers already rely on for professional development, resources, pedagogy, and curriculum guidance to communicate these benefits effectively across the breadth of Europe.

Suitable partners can be categorised under three tiers according to their scale and reach:

2.1.1 European education networks

These cross-continent, international education networks are capable of raising awareness of the opportunity and benefits of becoming a Blue School across large parts of the continent. Examples include:

- eTwinning (European School Education Platform)
- European Schoolnet (EUN)
- Scientix Community for Science Education
- European STEM Alliance
- Green/eco school networks

2.1.2 National education networks

Although limited to specific countries, National education networks can raise awareness of the opportunity and benefits of becoming a Blue School amongst large audiences. They provide mass dissemination opportunities and reduce adoption barriers by aligning NEBS projects with existing curricula and programmes:

- eTwinning National support organisations
- National education ministries & school inspectorates
- National STEM education platforms
- National Green School networks
- Teacher training institutes

2.1.3 Teacher Associations & Unions

Teacher associations and unions present an excellent opportunity to drive peer to peer communication and provide opportunities to reach teachers through a trusted platform. They are more numerous than European-wide education networks and their specific coverage is often geographically limited but they often have the regular and close contact with education their members:

- o Subject-specific associations:
 - geography teachers
 - biology teachers
 - primary education associations
 - Teachers for Future networks

2.1.4 Observed effectiveness in ProBleu: Local education partners

ProBleu recognises that where European education networks have proactively supported ProBleu dissemination, as for example Scientix have, large audiences have been reached effectively and efficiently. National education networks have similarly proven beneficial groups to partner with, the National STEM centre in the UK has keenly supported dissemination across the UK.

Subject specific association has proven a less effective form of partnership for the promotion of ProBleu and the NEBS, potentially due to limited understanding of benefits amongst subject specialists outside STEM subjects. This could become an area for development in future messaging around NEBS project work.

In the case of Catalonia, we increased the network thanks to the collaboration of the area educational services (called "Serveis Educatius") and the pedagogical resource centers (called "Centres de Recursos Pedagògics"), from the Catalan government, which are teachers that now are contracted by the department of education of the Catalan government, to assess schools.

This experience suggests that real growth comes from interaction in person or during a conference about the topic of the sea/water, and we can explain the benefits well. Applying this more individualised system has resulted in more than 250 Spanish Blue Schools, making Spain the country with the most schools certified by NEBS (after Portugal, which has the Ministry leading its network of Blue Schools).

2.2 Local project networks & partners

Blue School accreditation requires engagement with local partners capable of providing scientific or ecological expertise, supporting fieldwork and citizen science activities and connecting students with real world scenarios. Partnerships with local environmental and scientific projects increase the scientific validity of the NEBS, ensuring high quality scientific outputs are generated and that the community actively contributes to the development, as well as the dissemination, of cutting-edge scientific research.

As with those in the education networks, these partners vary significantly in scope and scale of operation. Potential partnerships that could support the development of the NEBS in this regard can be categorised as follows:

2.2.1 Environmental NGOs with education programmes

Where environmental NGOs feature education and outreach programmes there exists an opportunity to provide support for NEBS projects through ready-made educational programmes, and local project mentors. NGOs excel at youth engagement, citizen science, and communication.

- o Ocean Generation
- o The Ocean Race sustainability programme
- o Marine Conservation Society
- o Ocean Conservation Trust
- o WWF river basin programmes
- o European Rivers Network
- o Plastic Pirates
- o Healthy Seas
- o World Ocean Day for Schools

2.2.2 Marine & freshwater research institutions

These institutions are capable of endowing the NEBS and associated projects and outputs with scientific and academic rigour by providing the “blue expertise” and citizen-science credibility needed for NEBS project success. Researchers provide project co-creation, data

ProBleu #101113001

access, field activities, and citizen-science support—central to earning the “Blue School” accreditation:

- o European Maritime Board
- o Marine research institutes
- o Freshwater research centres
- o EurOcean network

2.2.3 Aquariums, science centres and museums

Aquariums, science centres and museums operate both as individual centres, and in some instances under large chain based operations with multiple sites across large geographical areas. They typically curate relationships with schools and formal education institutions and often already deliver ocean literacy activities. They produce ready-to-use educational materials and host thousands of school visits, making them ideal amplification partners.

- o EAZA & national members e.g BIAZA
- o EuroScience / Ecsite network of science museums
- o Large national aquariums (e.g., Nausicaá, Oceanário de Lisboa, Ozeaneum, Barcelona Aquarium).

2.2.4 Blue economy clusters & coastal authorities

Blue economy Clusters & Coastal Authorities provide real world local connections that bring local opportunities to life. They can provide fieldwork access, data, guest speakers, and real-world relevance that help schools design high-quality NEBS projects. They are often well connected with local business and community groups and will often serve as a hub or focal point with wide reaching local networks:

- o National and regional Blue Economy clusters
- o Port authorities and harbour masters
- o Marine protected area (MPA) managers
- o Local water authorities and river basin management bodies

2.2.5 Observed effectiveness in ProBleu: Local partners & networks

Local partners and networks have proven invaluable in facilitating the NEBS pipeline at all levels of partnership. Where environmental NGOs have an international dimension we have found regional or national directors have often been best placed to disseminate the calls in line with specific language and cultural considerations.

Marine and freshwater institutes have expressed varying levels of support for the programme, but their scientific contributions have added considerable robustness to school based project work.

Aquariums, science centres and museums' specialism and focus on engagement has resulted in an eagerness to support promotion of the call as well as practical engagement with school projects and programmes. EAZA and Ecsite have demonstrated the potential value of working with coordinating bodies in this sector to reach larger geographical areas.

2.3 Collaboration with EU-level Mission and other blue education projects

Continued engagement with EU-level Mission programmes presents an opportunity to maximise the reach of the NEBS. Such programmes develop very large networks of educational and scientific partnerships which are often aligned along similar themes. ProBleu has worked closely with SHORE and BlueLightS to ensure the best geographical coverage of EU countries and hosted a number of joint events to amplify the shared messaging. Examples include:

- o SHORE (existing NEBS pipeline programme)
- o BlueLightS (existing NEBS pipeline programme)
- o CLIMAREST
- o EMSEA
- o OTTERS
- o PHAROS
- o Submon - VIRTUE-s
- o Global Blue School Network
- o Atlantic Blue School Network

2.4 Prioritisation and selection of partnerships

As indicated above, the scope for partnership across the EU is enormous. A key recommendation of this report is to continue to develop this criteria into a full scoring matrix to help prioritise and steer the development of future partnerships. Partnerships developed under ProBleu have been identified against a set of criteria described below:

Reach: Partnerships will facilitate a range of different purposes and reach a variety of audiences. Evaluation of reach should therefore consider multiple different audiences; student/schools; scientific community; policy and governance bodies and general public engagement. Well established pan-European initiatives are likely to have the largest reach of all prospective partnerships.

Relevance to Mission objectives: Mission objectives should be incorporated into the scoring matrix to ensure that partnerships are thematically relevant

Ability to support citizen science: An important outcome of the NEBS is the development of, and engagement with, citizen science across Europe. By prioritising partnerships with the ability to support citizen science we can ensure this element of the NEBS is appropriately embedded in it's growth.

Geographical coverage: To date, the NEBS has received applications from all EU countries. However there is a significant disparity in the number of applications from these countries. Future partnership work should focus on those countries and regions which have not had high levels of investment from or engagement with the NEBS. Scoring in this criteria may change as the programme develops.

Long term sustainability of partnership: Priority should be given to partnerships with lasting, long-term, potential. This will allow for growth in the size and impact of the network as a whole.**Freshwater / Marine balance:** An important consideration for the NEBS is the inclusion of both freshwater and marine environments. Partnerships that maintain and feed into both areas of work should be invested in.

Economic status of student audience: The NEBS should be accessible to all students and schools regardless of economic status. Partnerships will need to reflect and support this through the provision of opportunities, funding and access routes. Communication and awareness strategies should also consider this criteria.

Potential funding contribution: Funding project work has been a core component of the ProBleu-NEBS pipeline. Any opportunity to attract funding to support the continued work of the programme as a whole should be recognised as valuable.

2.5 Reciprocal benefits for future partners

In order to ensure widespread uptake of invitation to partner with the Blue School movement, it is essential that prospective partners recognise opportunities for reciprocal benefit. These benefits should be robust and self evident, and where possible remain pertinent throughout the lifetime of the partnership. Financial gain should be considered a reciprocal benefit if applicable, but is unlikely to represent the primary outcome for most partners. Emphasis should therefore be placed on non-monetary benefits. Suggested examples include:

Strategic & reputational benefits:

- Enhancement of brand image - Association with large scale EU initiatives, especially those with an environmental or social development focus is likely to positively impact brand image for many corporate partners.
- Those organisations working with education, engagement and research communities will have access to relevant messages, comms and opportunities of interest to their audiences, potentially increasing their perceived value.

Operational & engagement benefits:

- Furthering organisational goals around reach and reputation growth, with opportunities to increase community engagement or participation in citizen science programmes.

Workforce pipeline benefits:

- The opportunity to directly influence the career pipeline into their industry by engaging with the formal education sector holds value for a wide range of partners and industries, especially larger organisations with significant employment requirements.

ESG/ reporting benefits:

- Many organisations will be able to evidence Environmental, Social and Governance responsibilities through their support of the NEBS.
- Staff satisfaction and engagement benefits may be experienced by partners whose contribution involves direct engagement with the project and programmes created by the NEBS.

3. Recommendations for potential future partnerships

The following are the key recommendations for next steps in identifying a set of partners that will drive impact for the NEBS.

Recommendation 1: Strengthen partnerships with institutions and NGOs: Close partnership working with a wide variety of national and pan-European institutions has been instrumental in underpinning the success of the programme to date. Continue to capitalize on existing networks by working closely with educational institutions, environmental NGOs, and local authorities to extend reach.

Mid to large sized, nationally focused STEM linked facilities with strong existing outreach and education networks have proved to be a key industry partner for schools to work with in completion of their projects. Involvement often aligns with internally held objectives to engage schools in their community so partnerships at this level combine strong reciprocal benefits with an active, direct pipeline into the NEBS.

Umbrella bodies and organisations associated with such organisations have proved valuable partners in the onboarding process for these individual institutions.

Recommendation 2: Leverage word-of-mouth referrals: Develop content and materials that facilitate peer-to-peer promotion, encouraging more teachers to share funding opportunities within their professional networks. Suggested mechanisms include:

- Development of ready made referral resources, such as email templates and digital print materials that can be shared easily
- Promote the creation and dissemination of video referrals by previously funded schools on social media and other public platforms.

Recommendation 3: Establish Memorandums of Understanding with each partner, in order to formalise commitments of support and ensure sustainable, lasting relationships that underpin sustainable growth of the Network. These MOU agreements should be reviewed on an annual basis to ensure relevance and impact. MoUs should, where possible, be aligned with the Mission 'Restore our Ocean and Waters' objectives and include clear contributions towards NEBS growth (e.g. co-branded calls, shared events, data sharing).

Recommendation 4: Potential partnerships should be developed on the basis that both the Blue Schools Network, and the prospective partner, benefit from the relationship, rather than NEBS solely extracting from the partners it brings on.

ProBleu #101113001

Recommendation 5: Given a finite capacity to establish and tend partnerships through the programme, a method of determining the highest value / impact partnerships from the outset should be established. - A formally agreed set of metrics which allow for the assessment of potential partnership value and prioritisation of future partnership opportunities would facilitate this.

Recommendation 6: The distribution of grant funding to enable projects in schools has been instrumental in facilitating school participation in the programme. Feedback from schools indicates that many applicants would not have been able to complete their projects without access to the funding provided. Funding for the NEBS through partnership agreements may also be feasible, and should be explored as required.

Recommendation 7: The ProBleu website should clearly champion and celebrate current partners, to provide evidence to future partners of the benefits of partnership. Steadily increasing engagement with case study posts and testimonials throughout the project show it plays a key role in encouraging participation by wider audiences.

Recommendation 8: This report has been written from a pan-European perspective, focusing on development of the NEBS as a whole, however national bodies and agencies within specific countries play a key role in the development of the NEBS and can act as multipliers, significantly enhancing reach and impact in targeted areas. Potential focus areas should be identified using the ProBleu country engagement table & metric framework shown in the annex and as suggested in recommendation 5.

Acknowledgements

The Ocean Conservation Trust would like to thank the ProBleu partners for their invaluable contributions to this work, without whom it would not have been possible to reach so many different networks across Europe. The work underpinning this report would also not have been possible without the interest and enthusiasm of teachers across the continent, towards the ProBleu and NEBS programmes as a whole. Additional thanks go to EU4Ocean, EMSEA and the NEBS team for their support and advice in compiling this report and building the outputs it is based on.

References

EU4Ocean: [EU4Ocean Coalition | Drive change together](#)

Mission Ocean: [Restore our Ocean and Waters - Research and innovation](#)

Network of European Blue Schools: [Network of Blue Schools | Little waves make a big ocean!](#)

Annex 1: Partner priority index

Table 1: Partner priority index

Partner type	Typical scale	Example role in NEBS	Priority for future partnership (H/M/L)
Environmental NGOs with education programmes	Pan-European	Umbrella support for reaching national bodies	High
Environmental NGOs with education programmes	National	Umbrella support for reaching national bodies	High
Marine & freshwater research institutions	National	Direct work with schools to support project creation	Med
Aquariums, science centres and museums	Regional	Direct work with schools to support project creation	High
Blue economy clusters & coastal authorities	Regional	Awareness and local engagement	Med
European education networks	Pan-European	Promotion of opportunity through academia	High
National education networks	National	Promotion of opportunity through academia	High
Teacher Associations & Unions	National	Localised, trusted promotion	High
EU Level mission projects	Pan-European	High profile reputation and communication	High

Annex 2: ProBleu country application count

Table 2: Country application count for ProBleu

Applicant country	Applications	Applicant country	Applications
Greece	130	Latvia	5
Spain	98	Ireland	5
Lithuania	52	Iceland	5
Turkey	49	Estonia	5
Portugal	44	Tunisia	4
Romania	29	Slovenia	4
North Macedonia	29	Bulgaria	4
Italy	20	Slovakia	3
Kosovo	18	Norway	3
Albania	12	Moldova	3
Croatia	11	Denmark	3
France	10	Belgium	3
Georgia	9	Austria	3
United Kingdom	8	Netherlands	2
Serbia	8	Luxembourg	2
Cyprus	8	Israel	2
Armenia	8	Hungary	2
Poland	7	Germany	2
Sweden	6	Ukraine	1
Finland	6	Faroe Islands	1
Morocco	5	Czech Republic	1
Malta	5	Bosnia & Herzegovina	1