



D2.6 Blue Skills: Preparation and Participation Processes (Train & Take Part)

September, 2024



**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 the European Commission. Neither the European Union nor the granting authority can be held responsible for them

Document track information

Project information	
Project acronym	SHORE
Project title	SHORE: EmpOweR Students as the agents of cHangE
Starting date	01/08/2023
Duration	36 months
Call identifier	HORIZON-MISS-2022-OCEAN-01
Grant Agreement No	101112815

Deliverable information	
Deliverable number	D2.6
Work Package number	WP2
Deliverable title	Blue Skills: Preparation and Participation Processes (Train & Take Part)
Author(s)	Prepared as a collaborative effort with the participation and input from SHORE partners sponsoring Country Hubs in Austria, Estonia, Hungary, Italy, Poland, Romania, Turkey
Due date	30/09/2024
Submission date	31/08/2024
Re-submission date	01/07/2025
Type of deliverable	OTHER
Dissemination level	PU (Public),

List of acronyms

Acronym	Full name
EC	European Commission
EU	European Union
SHORE	SHORE: EmpOweR Students as the agents of cHangE
DG-MARE	DG for Maritime Affairs and Fisheries
CH	SHORE seven Country Hubs
NGO	Non-profit Organization

Table of Contents

DOCUMENT TRACK INFORMATION	2
1. INTRODUCTION.....	5
1.1 SHORE – A HORIZON “SISTER” PROJECT	6
2. BLUE SCHOOLS / NETWORK OF EUROPEAN BLUE SCHOOLS.....	7
2.1 PROMOTING THE BLUE SCHOOL CONCEPT	7
2.2 JOINING THE NETWORK OF EUROPEAN BLUE SCHOOLS	8
2.3 COOPERATION / TWINNING WITH BLUE SCHOOLS.....	9
2.4 SUPPORTING SCHOOL ALIGNMENT WITH THE EUROPEAN GREEN DEAL	9
3. REGIONAL ANALYSES.....	10
3.1 SHORE TARGETED REGIONS	10
3.2 SEVEN COUNTRY HUBS - UPDATE	12
3.2.1. <i>Base Analyses</i>	13
<i>Primary Schools</i>	18
<i>Secondary Schools</i>	18
3.2.3. <i>Provide Guidance to Schools</i>	19
4. METHODOLOGIES FOR IMPLEMENTING BLUE LITERACY IN THE CLASSROOM	21
4.1. OPEN-SCHOOLING METHODOLOGIES.....	22
4.2. SHORE BLUE EDUCATION SUPPORT	26
5. SAMPLE TEACHING ROUTES.....	27
THEMATIC TOPICS AND THEIR SUB-SUBJECTS:	29
6. OUTLOOK	31
7. CONCLUSION.....	33
ANNEX I- REPOSITORY OF RESOURCES	35

List of Figures

• Figure 1: SHORE - Open Call Target Areas	10
• Figure 2: SHORE - Open Call #2 Timeline	11
• Figure 3: SHORE – Lesson Plan Framework Template	25
• Figure 4: SHORE Repository of Resources Inventory	28
• Figure 5: Overview of SHORE Focus Topics	29

List of Tables

• Table 1: SHORE consortium	6
• Table 2: Countries Located Within SHORE's Targeted Regions	11
• Table 3: SHORE Country Hubs	12
• Table 4: OC#1 Results of Awarded Funding	20 - 21

ANNEX 1 – Repository of Resources Overview

References cited for each of the five SHORE focus areas	35 - 57
---	---------

Blue Skills: Preparation and Participation Processes (Train & Take Part)

1. INTRODUCTION

The European Union defines the Blue Economy as “all economic activities related to oceans, seas, and coasts” which covers a wide range of interlinked established and emerging sectors. As water is a vital need, home for many living things, the largest carbon sink, a transport corridor, a global resource and many more, without healthy waters, there will be no life on earth. Today, marine and freshwater ecosystems are rapidly degrading and efforts to protect them have not been sufficiently effective according to the implementation of the Marine Strategy Framework Directive Report (2008/56/EC) in 2020. As a result of human activity, the degradation in marine ecosystems is threatening European citizens’ and societies’ health, well-being, and prosperity and it is urgent to act to fulfill its EU Green Deal and [Mission Ocean](#), “Restore Our Ocean and Waters by 2030” objectives.

To support the Mission Ocean, it is essential to empower and engage citizens to take action and drive the transitions through deliberative democracy, social innovation, citizen science and awareness campaigns and following the ECOSOC (Economic and Social Council) Youth Forum on “Youth taking action to implement the 2030 Agenda” (www.youthforum.org/), young people must be recognized as the agents of change whose contributions will bring benefits both to themselves and society. Currently, a global effort is underway to deliver the 2030 promise -by mobilizing more governments, civil society, and businesses and calling on all people to make the UN Sustainability [Global Goals](#) their own. Even if there is progress being made, overall, the aims and goals are not yet performed at the scale required. The SHORE Project aims to tackle these issues with coordinating activities and engaging the communities first on local then international level and mobilizing all sectors of society for a “Decade of Action” and for the implementation of the Sustainable Development Goals.

1.1 SHORE – A HORIZON “SISTER” PROJECT

To equip communities with relevant knowledge and skills with a sense of excitement for individuals to understand the importance of the ocean to their lives and realize how their individual actions affect the marine environment with community activities, exhibitions, school projects and online interaction platforms. Fourteen partners form the SHORE consortium to cover the project’s five targeted regions:

PARTNER	ROLE
Yildiz Technical University, Turkey	YTU – Coordinator, WP1 Leader (Project Management)
Euronovia, France	EURN - Partner, WP5 Leader (Communications)
Mare Nostrum, Romania	MAREN - Partner, WP3 Leader (Events) and Black Sea Country Hub Host
University of Padova, Italy	UNIP - Partner, Italy Country Hub Co-Host with MDB
RK Soft, Turkey	RKS - Partner, WP4 Leader (Portal)
Kinderburo Universitat Wien, Austria	KUW - Partner, Austria Country Hub Host
Turk Denz Arastirmalari Vakfi, Turkey	TDAV - Partner, Turkey Country Hub Host
Children's Museum, Italy	MDB - Partner, Italy Country Hub Co-Host with UNIP
Budapest University, Hungary	BME – Partner, Hungary Country Hub Host
Global Skills Network, Estonia	GLOBAL – Partner, WP2 Leader (Blue Skills) and Estonia Country Hub Host
F6S Network, Ireland	F6S - Partner, WP6 Leader (Open Calls)
Crowd Helix, UK	CROWDH – Partner
Akademia WSB, Poland	WSB - Partner, Poland Country Hub Host
EU&Pro, Czech Republic	EU&P - Partner

Table 1: SHORE consortium

The main objective of SHORE is to enhance the ocean literacy of primary and secondary school students and educators with a multidimensional perspective and international coordination and cooperation, to equip them with the necessary skills and knowledge to become eco-citizens. It is aimed to fund up to 100 projects during the 36-month lifespan of the SHORE project, with each school project able to receive up to 10,000EUR funding.

The specific objective of SHORE is to expand and broaden the ocean and water literacy knowledge/programs among children and youth, teachers and schools (primary and secondary schools) in cooperation with the [Network of European Blue Schools](#) (NEBS) and [EU4Ocean Coalition](#).

The recognition of the Blue Economy by the European Union underlines the interconnectedness of various economic activities related to oceans, seas and coasts and highlights their vital role in sustaining life on Earth.

Therefore, SHORE will raise awareness and promote blue education by acting as an intermediary between researchers, formal and non-formal educational communities and societal stakeholders to foster lifelong learning for present and future generations, aiming to have an impact at both the local and global levels

2. BLUE SCHOOLS / NETWORK OF EUROPEAN BLUE SCHOOLS

2.1 Promoting the Blue School Concept

The [NEBS](#) was established as a hub for all schools and teachers that strive to engage students with oceanic topics and educate a new generation of ocean literate young citizens. On the journey to becoming a European Blue School, teachers and pupils will improve their understanding of the ocean and develop a sense of responsibility towards our

shared planet. Creating awareness and a feeling of responsibility for our ocean encourages students to become more active and responsible European and global citizens. The program challenges schools to *Find the Blue* and explore their connections to the ocean while creating networks all across Europe. The NEBS is an initiative of the European Commission, supported by DG MARE and was developed by the EU4Ocean Coalition partners. The main goals of the program are to:

- Create a more ocean-literate society where schools become agents for change and sustainability
- Build bridges between ocean professionals and schools
- Set up a network where teachers can share experiences and collaborate with other schools, nationally and internationally



2.2 Joining the Network of European Blue Schools

Schools wanting to become a certified EU Blue School must create a blue project that addresses compulsory criteria outlined in the [handbook](#), which also emphasizes the teaching principles behind the European Blue School initiative and the European Blue School certification process. It is designed to meet the teachers where they are on their ocean journey and includes a wealth of useful resources and best practice to inspire teachers to find connections between a school and the ocean and other water bodies. It has built in flexibility to encourage and support teachers across all disciplines to bring the ocean to their classrooms, whether through biology, physics, chemistry, technology, mathematics, history, literature, or the arts. By becoming a European Blue School, teachers have the opportunity to:

- be able to work collaboratively with a growing network of European colleagues;
- be supported at every step by the Handbook and Coalition;
- have access to teacher development opportunities in different languages organized by EU4Ocean Coalition members and other European institutions and projects;
- be in line with international initiatives including the UN's Decade of Ocean Science for Sustainable Development.

Through project-based learning, teachers actively engage to bring marine topics into the classroom, making marine (science) education an essential part of the school curricula, allowing students to explore new societal concepts such as 'Ocean Health', 'Food from the Ocean' and 'Climate and Ocean' in a meaningful way. By becoming a European Blue School, schools give rise to a new generation of ocean-literate citizens.

Teachers from European Blue Schools are themselves agents of change and inspiration to their students, allowing them to address local to global challenges in school. An agent of change is someone who sees a problem in his or her community, large or small, and does something to take action for substantial change. European Blue Schools are new school ecosystems that foster the acquisition of ocean knowledge, blue skills and values together with the ocean community. Here they work on real-life issues with real-life ocean

professionals that can support them to address ocean topics in the classroom. European Blue Schools champion the concept of open schooling. They encourage the development of local partnerships to make the learning context relevant.

2.3 Cooperation / Twinning with Blue Schools

SHORE's Open Call #1, which took place 17 January – 20 March, 2024, also promoted collaboration amongst members of the NEBS, between applicant schools and NEBS members, as well as with schools aspiring to become accredited NEBS members, with the intention of establishing cooperation during implementation of awarded projects. Twinning activities aim to promote shared learning among students and teachers with a focus on encouraging learning inside and outside the classroom. Teachers of awarded schools are able to join the [European School Education Platform's e-Twinning](#) to run on-site or online activities with their students along with colleagues from other European countries.

2.4 Supporting School Alignment with the European Green Deal

SHORE aims to support schools in joining the [European Climate Pact](#), an EU initiative that empowers them to take meaningful steps toward building a more sustainable Europe by promoting actions aligned with the European Green Deal. Schools that succeeded in SHORE's OC#1 process made a commitment towards decarbonization or at least carbon neutrality in their projects and activities in alignment with the Climate Pact Pledge. These actions are aimed to mobilize a broad spectrum of society to take practical steps toward achieving the EU's climate goals, particularly those outlined in the European Green Deal, which includes reaching climate neutrality by 2050.

Building on its success of SHORE programming nurturing students as Agents of Change, we also recognize the crucial role teachers can play as pioneers of change in blue literacy by implementing blue education in their classrooms. Projects having been awarded funding from SHORE's OC#1 also align with the EU4Ocean philosophy of promoting ocean literacy and fostering a collective understanding of the ocean's essential role in our lives and the environment. During the mentoring phase for projects awarded funding from

SHORE's OC#1, the country hubs will encourage schools to apply for the [MakeEUBlue Awards](#), which honor innovative and outstanding initiatives in the field of ocean literacy in Europe.

3. REGIONAL ANALYSES

3.1 SHORE Targeted Regions

SHORE focuses on five targeted regions: the areas around the Baltic Sea, Black Sea, Mediterranean Sea, Rhine River, and Danube River. These regions were chosen to align with the EU Mission Ocean Mission Implementation Plan, Lighthouse Areas serving as focal points for implementing and demonstrating innovative solutions to restore and protect marine and freshwater ecosystems, and topics related to blue literacy.



Figure 1: SHORE - Open Call Target Areas

The following countries are located in the targeted regions:

Baltic Sea Area	➤ EU: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden ➤ Non-EU: Russia
Black Sea Area	➤ EU: Bulgaria, Romania ➤ Non-EU: Georgia, Russia, Türkiye, Ukraine
Mediterranean Sea Area	➤ EU: Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia, Spain ➤ Non-EU: Albania, Algeria, Bosnia & Herzegovina, Egypt, Israel, Jordan, Lebanon, Libya, Montenegro, Morocco, Tunisia, Türkiye
Danube River Area	➤ EU: Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Romania, Slovakia, Slovenia ➤ Non-EU: Bosnia and Herzegovina, Moldova, Montenegro, Serbia, Ukraine
Rhine River Area	➤ EU: Austria, Belgium, France, Germany, Luxembourg, The Netherlands.

Table 2: Countries Located Within SHORE's Targeted Regions

SHORE's seven country hubs in Austria, Estonia, Hungary, Italy, Poland, Romania, and Turkey will play a major role in disseminating information about the open calls sponsored by the Horizon sister projects: [SHORE](#), [ProBleu](#), [Blue Lights](#). All three projects will synchronize the next open call in a coordinated manner. The following timeline refers to SHORE's Open Call#2, to be launched on September 18, 2024:



Figure 2: SHORE - Open Call #2 Timeline

Each country hub will create a dissemination strategy unique to their region that spreads information about the open call to the widest audience possible.

3.2 Seven Country Hubs - UPDATE

The implementation of SHORE programming and the coordination of activities that will engage schools and stakeholders in combating ocean blindness - i.e., the lack of awareness or understanding of the ocean's crucial role in the Earth's ecosystem and human life - are supported by country hubs (CH) located within the five SHORE regions:

Austria – hosted by KUW	Danube River / Rhine River
Estonia – hosted by Global	Baltic Sea
Hungary – hosted by BME	Danube River
Italy – co-hosted by UNIP and MDB	Mediterranean Sea
Poland – hosted by WSB	Baltic Sea
Romania – hosted by MAREN	Black Sea / Danube River
Turkey	Black Sea / Mediterranean Sea

Table 3: SHORE Country Hubs

The seven CHs form the backbone of SHORE as a Horizon sister project to promote blue literacy as it pertains to oceans, seas and rivers. The job of the CHs includes creating links within their regional area by providing an effective support mechanism for guidance, improvements and recommendations for teachers to become involved with Blue Economy actors, including other educators and researchers, nonprofit educators, outreach groups, researchers, professionals and others, in alignment with promoting open-schooling methodologies. Each CH is tasked with (1) conducting base analyses that includes (2) an overview of formal education in their localities, and (3) providing guidance to schools in their region to participate in SHORE's open calls and join the NEBS, engage in cross-border collaboration with other schools and with actors of the Blue Economy.

3.2.1. Base Analyses

Austria



Austria/Vienna: While local efforts have established a solid foundation for ocean literacy, the global perspective remains a critical aspect that



SHORE is uniquely able to approach. Efforts to help the wider society in Austria truly realize the importance of the ocean and our global water system could be significantly boosted in the short-to-medium term by pursuing two approaches: On the one hand, internationalization enables cross-thematic networking while simultaneously promoting global interconnections. On the other hand, providing ready-made educational materials for everyday school activities will offer the support many teachers need.

The international consortium, dedicated educators and a range of local and global stakeholders in global initiatives make SHORE a powerful force in promoting ocean literacy. For the future, SHORE's commitment to a holistic and global approach in Austria may have a lasting impact in how the oceans are perceived, understood and will be protected.

Estonia



Estonia is one of three “Baltic” nations, with Lithuania and Latvia, characterized by several unique historical, cultural, geographical, and socio-political features. The Baltic countries are heavily influenced by the Baltic Sea with the fisheries sector crucial for employment in coastal regions. It provides jobs not only in fishing but also in processing, marketing, and related services. Small-scale fisheries are particularly vital for sustaining communities in remote regions, which is most of the Estonian landscape.

Baltic countries are known for their relatively high levels of digital innovation and economic development within the context of post-Soviet states. Key sectors include information technology, manufacturing, agriculture, and services. Estonia, in particular, is known for its advanced digital infrastructure and e-government services. They serve as

fertile testing grounds for alternative energy, particularly wind farming, underwater drones and robotics used to collect data and create high-resolution maps of the sea floor and marine habitats, and satellite and aerial remote sensing technologies that provide comprehensive views of the Baltic Sea's surface, helping to monitor environmental conditions, track algal blooms, and assess the impact of human activities.

These technological advancements join aquariums and science-centers facilities such as the Tallinn Sea Life Museum and University of Tartu Marine Science Institute utilize technology to educate the public about the Baltic Sea. Interactive exhibits, digital displays, and multimedia presentations enhance visitor engagement and learning that not only enhance ocean literacy but also foster a deeper understanding and appreciation of the Baltic Sea's unique environment. They provide powerful tools for education, citizen engagement, and the promotion of sustainable practices.

Even though Blue Education is already part of the 7th/8th grade curricula in Estonia, the United Nations Blue School Network, which is very active in the Baltic States, further reinforces the commitment to embedding blue literacy into the core curriculum. The Baltic Living Lab (BLL - <https://bluebalticecosystem.com>) serves as SHORE's Estonian Country Hub aimed at mentoring schools to participate in the various sister-project activities of the EU Mission Ocean "Restore Our Ocean and Waters by 2030" while enhancing the existing educational framework. The BLL has developed targeted outreach strategies to engage schools during the 2024-25 and 2025-26 school cycles.

Hungary



Nowadays, the protection of our oceans and other natural waters is among the leading priorities worldwide, but ocean literacy among the population has room for a lot of improvement. In our opinion, learning about "blue" topics should start at school, because the necessary resources are already available in these institutions, and the young target group can be reached with relative ease there. Teachers play a big role in spreading knowledge, so it is very important that they receive adequate support, even from outside the school.

The SHORE project aims to provide guidance to educators and schools regarding the blue curriculum. The goal is to increase the available teaching materials, and to facilitate the development and implementation of school projects.

The Budapest University of Technology and Economics, as the head of the Hungarian CH, supports the work of teachers in the Danube and Rhone region, the participation of schools in the SHORE project, and the efforts to join to the Blue School Network. These activities, as well as the development of relations with comparable entities in other countries, will greatly promote the active participation of our citizens in the protection of our waters in the future.

Italy



As the Italian Country Hub, the University of Padova is dedicated to supporting proactive schools, some of which are already implementing water-related projects which can benefit from SHORE.

The overall goal is to empower the Italian youth in taking action in the preservation of various precious characteristics of the Italian coastline and the Mediterranean. The CH is home to a wide range of marine research initiatives reflecting the wide range of distinctive features of Italian coasts, and interaction of people with the sea.

Italy is a country with marked environmental contrasts, and this is also evident in the context of water literacy. Positioned in the center of the Mediterranean, it has, since Antiquity, been actively engaged with the sea in terms of meeting primary needs of the population, supporting industry, and providing transportation routes. However, Italy suffers from a very unequal access to the sea affecting the number of schools enrolled in the Network of European Blue Schools. Indeed, the low number of Blue schools in the country is probably related to the rarity and limited scope of active programs about ocean literacy at the national level. On the other hand, Italy can rely on a strong net of NGOs and blue economy actors and stimulate a very dynamic educational system. In this context, teachers and schools have a relatively large space and significant freedom in developing projects. Against this background the SHORE project presents a major

opportunity to effectively boost ocean literacy of the youth population primed to include the sea in their understanding of the world, and to provide the tools required from any agent of change.

Poland



Currently in Poland, 'ocean education' does not entail a separate, mandatory block of classes in schools, only the content is. The topics are usually covered in other courses including, among others, geography, biology, Polish language, various inter-subject pathways, often at the discretion of the teacher. According to the Ministry of Education, the requirements and content specified in the core curriculum are comprehensive and allow teachers to address the most relevant topics in this area. Regardless, schools have the opportunity to organize additional educational activities on topics such as climate and environmental protection, including those that correspond to the special interests of students. In Poland, the students' awareness about climate change is at a very low level, and as a result, they do not effectively undertake activities to explore and efforts to tackle this problem. Thus, one would not be very off-the-mark to claim that, in the eyes of young people, this topic is neither cognitively important nor pragmatically relevant. In Poland most of the schools in the Blue Schools Network is situated at the coastal area of the Baltic Sea. Polish Country Hub is represented by WSB University which, together with a group of experts and dedicated teachers, will promote ocean literacy among students and other teachers, focus on promoting ocean literacy among students and increasing the number of Blue Schools in other parts of Poland as well. Through active endeavors under the SHORE project, Polish Country Hub aims to provide guidance to educators, teachers and schools regarding the blue curricula, by showing them alternative ways to educate students and promote ocean literacy with special focus on participatory approach and involvement of local communities.

Romania



In an era where the health of the global ecosystem is intricately tied to our understanding of our world's vast and mysterious oceans, the blue activities take center stage as a pioneering initiative to enhance ocean literacy in the blue education institutions. The Romanian Country Hub is represented by Mare Nostrum NGO situated along the Black Sea coastline and has been dedicated to fostering a positive shift in mentalities and behaviors for the past 30 years, all aimed at conserving and enhancing the marine environment.

Besides the challenges and obstacles faced in advancing ocean literacy education in Romania, there are numerous avenues through which awareness, education, and environmentally conscious behaviors can be introduced and promoted. Achieving long-term success will require embracing creative ways and securing the involvement of a diverse range of stakeholders. We aim to offer guidance, training, enhancements, and recommendations to various stakeholders including teachers, museum educators, outreach groups, and citizens. The primary rationale for establishing the country hubs is to enhance SHORE's influence by collaborating with regional and local stakeholders, guiding schools in project implementation, and efficiently executing dissemination and communication activities in the Black Sea and Danube regions.

One way SHORE can make a significant impact is through its connection with the Black Sea, particularly via Romanian schools. This association is pivotal as it sets the stage for the future rollout of a comprehensive 'Blue Schools' initiative, which aims to enhance Ocean Literacy within the classroom environment. Also, we will promote education and training in the fields of marine sciences, we will advance Ocean Literacy in Romania in general and the Black Sea and Danube regions in particular, and will raise educators' awareness of ocean issues and the need for a sustainable future for our coasts and seas. Another benefit of these efforts will be the improved quality of marine sciences education.

Türkiye:

Surrounded by seas on three sides, Türkiye presents a unique geographical context for SHORE's efforts. Leveraging the efforts of an international consortium, committed educators, and engagement with numerous local and global stakeholders, SHORE emerges as a formidable advocate for promoting ocean literacy in Türkiye. By adopting a holistic and global approach, SHORE aims to have a lasting impact on how the oceans are perceived, understood, and ultimately protected in Türkiye's context.

3.2.2. Formal Education Overview

Primary Schools - Primary education lays the groundwork for a lasting passion for learning and equips students with essential skills to succeed academically and socially throughout their lives. The social and emotional skills developed during this stage serve as the foundation for maintaining healthy relationships and emotional wellness in the future. At the primary-school level, play-based and interactive activities are recommended, selected based on students' individual traits, awareness levels and learning styles. Methodologies such as Personalized Education, Collaborative Learning, Flipped Classroom, Inquiry-Based Learning, Montessori, Project-Based Learning, Student-Centered/Constructivist Approach, and Teacher-Centered Instruction can be counted among the recommended methods for primary school students

The SHORE Consortium is convinced that future-oriented formal ocean literacy needs to start in primary school and be linked to the local environment of the children. This will foster a strong sense of responsibility and empower them to protect and preserve the natural resources within their own community as well as developing an understanding for the global inter-connectedness

Secondary Schools - Based on the knowledge gained in primary school, teaching water-related topics in secondary school illustrates connections between global contexts and complex issues. Students acquire the skills to develop sustainable solutions for social problems

Secondary education has a significant impact on students' lives, offering a variety of subjects and extracurricular activities for them to discover and pursue their interests and passions. It allows students to explore their interests and potential career paths. Moreover, it utilizes formal teaching methods to foster critical thinking and independent learning, prompting students to engage with diverse groups and navigate complex social scenarios.

For secondary school students, it is highly recommended to utilize interactive, exploratory applications that facilitate communication with Mission Ocean stakeholders, allow for assessment, and encourage hands-on experience.

3.2.3. Provide Guidance to Schools

The SHORE Country Hubs play a critical role in creating a dissemination strategy for the open calls (OC), which is implemented prior to the launching of the OCs and followed through with guidance up to submission, aimed at achieving four critical outcomes that are important for the project's success:

- Mobilize students, teachers and other actors from the school ecosystem and the local community to co-design, co-develop and co-implement projects that can contribute to expand and broaden youth's ocean & water literacy in a life-long run
- Support educators in developing and utilizing new and innovative teaching and learning resources based on open-schooling methodologies and Blue Skills Curricula
- Support the accreditation of schools and their projects within the NEBS established under EU4Ocean coalition and collaborate with other Blue Schools
- Help achieve EU Mission Ocean objectives in the grand scale of EU initiatives for reaching tangible solutions for climate neutrality, nature preservation and the restoration of Earth's water bodies

In applying for SHORE funding, applicants had described cooperation activities with other teachers and their students, designed to enable them to exchange experiences, best practices and successful stories stemming from their blue projects and blue literacy-driven actions. Once each open call has been concluded, the Country Hubs engage in

mentoring awarded schools towards a successful implementation of projects receiving funding. While a more detailed report of the results from SHORE's OC#1 will be submitted under WP6, the following table illustrates the mentoring roles required for successful projects, making note that an additional task will be to assist the process of the award-winning school joining the NEBS and collaborating with other schools:

	Country	Project	Member EUBSN?	Call Topic	Region
1	Turkey	DEtSSO	No	Topic # 1 Sea-based activities	Mediterranean Sea
2	Spain	BLU-ECHO: Blue School Calendar for Hands-On Ocean Education	No	Topic #5 Sustainable use of water resources	Mediterranean Sea
3	Hungary	TFD	Yes	Topic #5 Sustainable use of water resources	Danube River
4	Hungary	KLG SEAFetyNet	No	Topic # 3 Biodiversity	Danube River
5	Spain	BH-FODAT	No	Topic # 1 Sea-based activities	Mediterranean Sea
6	Turkey	AquaAlert	No	Topic # 2 Hazardous Substances and Marine Litter	Black Sea
7	Turkey	Worst	No	Topic #5 Sustainable use of water resources	Black Sea
8	Turkey	Chasing the Blue	No	Topic # 3 Biodiversity	Black Sea
9	Greece	eOY4Ps	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
10	Spain	DBA	Yes	Topic #5 Sustainable use of water resources	Mediterranean Sea
11	Turkey	RME: HotPS	No	Topic #5 Sustainable use of water resources	Mediterranean Sea
12	Italy	TRiO	No	Topic # 3 Biodiversity	Mediterranean Sea
13	Sweden	ATOL	Yes	Topic # 3 Biodiversity	Baltic Sea
14	Jordan	TRiO	No	Topic # 3 Biodiversity	Mediterranean Sea
15	Greece	SQ4POL	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
16	Turkey	WAVE	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
17	Romania	FEEL&HEAL	No	Topic # 3 Biodiversity	Danube River

18	Turkey	MASCOT	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
19	Greece	Seafarer's Dream	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
20	Turkey	CHILDREN OF THE BLACK SEA HAND IN HAND	No	Topic # 2 Hazardous Substances and Marine Litter	Black Sea
21	Turkey	S.E.A	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
22	Italy	AMB	No	Topic # 3 Biodiversity	Mediterranean Sea
23	Croatia	SEAA	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
24	Turkey	OED	No	Topic # 2 Hazardous Substances and Marine Litter	Black Sea
25	Turkey	ILCC: Marmara	No	Topic # 4 Climate Change	Mediterranean Sea
26	Turkey	BLUE SEAS OF THE FUTURE	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
27	Turkey	HEAL	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
28	Greece	ZeroMarinePlasticsEdu	No	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea
29	Austria	1C_LEIB_LEHO	No	Topic # 2 Hazardous Substances and Marine Litter	Danube River
30	Croatia	MPAD	Yes	Topic # 2 Hazardous Substances and Marine Litter	Mediterranean Sea

Table 4: OC#1 Results of Awarded Funding

4. METHODOLOGIES FOR IMPLEMENTING BLUE LITERACY IN THE CLASSROOM

Integrating educational resources and programming that help students understand the influence of Earth's water bodies on them, and vice versa, is of primordial importance as an essential element for SHORE's success. It is vital to engage youth to drive meaningful changes and safeguard the planet. Educators and schools play a critical role in this effort.

SHORE will focus on getting students, teachers, and schools involved in advancing the EU Mission Ocean objectives by boosting blue literacy through collaborative activities and projects. The objectives of cooperation with schools include:

- Increasing awareness among students and teachers about marine- and freshwater-related issues and their connection to the EU Mission Ocean, “Restore Our Ocean and Waters by 2030”;
- Deepening knowledge about blue education, environmental awareness, and skills related to the blue economy;
- Advocating for inclusion of blue literacy-related instructional resources about marine and freshwater ecosystems in formal and non-formal learning environments;
- Empowering students to drive change and promote sustainable practices related to challenges facing marine and freshwater ecosystems
- Accessing resources that assist teachers in integrating relevant SHORE topics (see below) into school curricula and communities.

These activities can help students deepen their understanding of both marine and freshwater environments while fostering their curiosity, creativity, and appreciation for Earth’s water bodies. It is important to note that utilizing modern, innovative teaching methods for both teacher preparation and student engagement will enhance learning outcomes. Employing technology, digital tools and pedagogical methodologies are highly-recommended approaches.

4.1. Open-Schooling Methodologies

Future-oriented blue literacy requires modern and innovative teaching methods beyond the classroom. Schools are embedded within the broader societal system, acting as vital bridges between education and real-world challenges that students face in their daily lives. Their role extends beyond the classroom, requiring active collaboration with a diverse array of external institutions, including environmental organizations, community groups, governmental bodies and industry stakeholders. The open-schooling approach allows for the development of collaborative, practical and relevant solutions that empower

students to become informed and engaged citizens. In the context of promoting blue literacy, this interconnected effort is particularly crucial. Schools alone cannot bear the responsibility of fostering this awareness; it requires the efforts of all societal actors. By working together, schools and their community partners can create impactful educational programs, raise public awareness and inspire action that resonates within the students' immediate environments. Open schooling embeds sustainability into the curriculum, teaching students about the importance of conserving natural resources, reducing waste and protecting ecosystems. Educating the next generation on sustainability ensures that future leaders and citizens are committed to maintaining the health of Earth's water bodies and protect ecosystems. The use of open schooling methodologies can significantly support the EU Mission Ocean by engaging a broad spectrum of the community — Blue Economy professionals, scientists and researchers, local stakeholders, policymakers, etc. — in collaborative, hands-on learning experiences. Open schooling involves making schools active hubs of learning where students work on real-world problems with the support and involvement of the wider community, to support:

1. Community Engagement and Awareness by encouraging collaboration between schools and community members, including local environmental organizations, government agencies, and businesses. The aim of the SHORE Open Calls is to mobilize actors in local communities to co-design, co-develop and co-implement projects that can contribute to expand and broaden blue literacy for young people. By involving students and their communities in projects related to restoring our ocean and waters, awareness and understanding of the issues are significantly heightened. This increased awareness can drive local actions to reduce pollution, restore habitats and promote sustainable practices, all of which are crucial for achieving the mission's goals.

2. Hands-On Learning and Citizen Science by enabling students to participate in hands-on learning activities proposed in their school project, such as water quality monitoring, habitat restoration, species identification, etc., that involve gathering data, conducting experiments, and contributing to citizen-science projects. By engaging in these activities, students contribute to the collection of valuable data that can inform larger scientific studies and restoration efforts, directly aiding the Mission's objectives of citizen engagement. School projects submitted to SHORE's open calls are intended to be co-

designed, developed and implemented, thus open-schooling methodologies support student-led initiatives that foster a sense of ownership and responsibility for their learning and the environment.

3. Interdisciplinary Education Approaches that integrate disciplinary subjects like biology, geography, chemistry, and social studies to explore complex environmental issues and ocean science. This approach helps students understand the multifaceted nature of ocean restoration, linking ecological health with economic, social, and cultural factors. Such a comprehensive understanding is vital for creating sustainable solutions that align with the mission's objectives. The SHORE Lesson Plan Framework for our five focus areas (*sea-based activities, biodiversity, hazardous substances, climate change, sustainable resource use*) integrates concepts, skills, and activities from multiple subjects and disciplines into a single, cohesive learning experience. This approach helps students make connections between different areas of knowledge and apply what they learn in one subject to another, fostering a deeper and more comprehensive understanding of the topic. The framework also aligns with the European Framework for Lifelong Learning Key Competences to ensure that the educational content not only covers the subject matter but also develops essential skills and abilities that students need for personal development, active citizenship, social inclusion, and employment.

[LESSON PLAN SUBJECT AND TITLE]


Lesson Title		
Class Level	Subjects	Total Lesson Duration
European Framework for Lifelong Learning - Key Competences		
1. <i>Mathematical Competence and Basic Competences in Science and Technology</i>		
2. <i>Digital Competence</i>		
3. <i>Learning to Learn</i>		
4. <i>Social and Civic Competences</i>		
5. <i>Critical Thinking and Problem-Solving</i>		
6. <i>Cooperation and Teamwork</i>		
7. <i>Ethical Awareness</i>		
8. <i>Sense of Initiative and Entrepreneurship</i>		
Recommendations for Selected Methodologies		
Useful Prior Knowledge		
Learning Objective(s) - Upon completion of lesson, students will be able to:		
Activities - Materials Needed		
Lesson Outline		
Classroom Instruction		
In-Class activity / experiment or extra-curricular activity		
Recap / Conclusion (quiz)		
Learning Outcomes / Evaluation		
Keywords		
Label Cards		

Figure 3: SHORE – Lesson Plan Framework Template

4. Problem-Solving and Innovation that enable students to identify water-related challenges of the body of water in close proximity, whether the sea or river, and begin to think of what solutions are required to address the challenges faced. These challenges are complex and interconnected, necessitating multidisciplinary approaches and global cooperation. Some of the most pressing issues have been identified as challenges facing the project's five focus areas around which the open calls are organized and lesson plans are recommended:

The creative problem-solving fostered by open schooling can lead to new, scalable solutions that contribute to restoring waters across the EU. Contextual Learning fostered by sample lesson plans can inspire broader societal changes that align with the Mission's goals.

5. Sustainability/Blue Education, when embedded into the classroom teaching and learning, can help students understand the importance of conserving natural resources,

reducing waste, protecting ecosystems and taking ownership for the health and well-being of Earth's water bodies.

4.2. SHORE Blue Education Support

Supporting educators in providing a contextual understanding of the influence Earth's water bodies have on humans, and vice versa, can involve a variety of engaging activities that help students explore the complex relationships between aquatic environments and human society. Country Hubs are tasked with providing guidance for participation in the various activities carried out by SHORE under the aegis of Horizon sponsorship to promote the EU Mission Ocean, "Restore Our Ocean and Waters by 2030", aimed at nurturing a new generation of Agents of Change by integrating blue literacy into everyday education, within the following content:

- **GUIDANCE** - schools within the vicinity of the seven CHs hosted by selected partners will receive guidance on crafting blue school projects, applying to open calls for funding and joining the NEBS..
- **COLLABORATION** – Designed as an open-source virtual learning environment and education management system created to maximize the impact of learning, the [SHORE Community Platform](#) serves as a host for Education and Awareness, Project Monitoring, Gamification, and a Virtual Learning Environment. The CHs will also facilitate engagement between schools to collaborate on projects and within the NEBS to participate in e-Twinning as well as the [Mission Ocean & Waters Helix](#), an international open innovation community of experts from academia, education and training in the blue economy, water and marine ecosystems and related fields, launched with a specific focus on driving impact, leveraging resources and facilitating knowledge dissemination.
- **ACCESSING RESOURCES** – Each of the seven SHORE country hubs have devised a series of events that consist of webinars, "meet & greet" and other structured activity such as hackathons and summer institutes that support teachers in their goals of implementing blue literacy in the classroom.
- **REPOSITORY OF RESOURCES** – Our vision is to curate myriad publications, videos, infographics, etc. as resources that will help teachers foster an understanding of

the roles Earth's water bodies play in regulating climate via the planet's ecosystem. As part of our mission to support the EU Mission Ocean, "Restore Our Ocean and Waters by 2030", SHORE has created a repository of teaching resources consisting of both newly-developed material from our project partners as well as a curated collection of online resources. Thus, SHORE aims to recognize the wealth of work to promote blue education already accomplished across the globe that can be exploited for the benefit of European schools, especially those located in the five targeted regions. The repository also contains references to a series of videos, SHORE Flicks, created to address three major challenges affecting our oceans and environment: plastic pollution, water scarcity, and food waste. Each video combines expert insights, real-world examples, and actionable solutions to promote ocean literacy and inspire positive change, and have been formatted specifically for school-aged children and adolescents in the following age groups: 7-10, 11-14, 15-18. SHORE Flicks will serve as a valuable educational tool, available in a range of languages of consortium partners, that will help teachers convey the urgency of addressing the challenges while promoting ocean literacy and encouraging positive environmental stewardship in their native tongue.

5. SAMPLE TEACHING ROUTES

As previously mentioned, the SHORE CHs gathered a repository of resources that will enhance ocean literacy teaching and learning by curating resources to help teachers integrate ocean literacy principles into classroom instruction, from primary to secondary education. These resources emphasize the interconnectedness of aquatic ecosystems and their impact on the broader Earth system — affecting climate, weather, biodiversity, and human life while also highlighting how human activities influence the health and well-being of Earth's water bodies. During SHORE's first year, consortium partners have curated a range of resources that will raise awareness of the project's five focus areas that can be used as a structured educational experience for teachers, made available for reference on the SHORE Community Platform.



Figure 4: SHORE Repository of Resources Inventory

These have been categorized by language, appropriateness for age groups and teacher training material. Annex I to the D2.6 Deliverable Report contains the details of the resources cited for each of the five focus areas, formatted for accessibility via the SHORE platform. Educational materials curated for these topics enhance learning outcomes in both formal education classrooms as well as in non-formal learning environments. SHORE partners will be on the look-out throughout the lifecycle of the project for material and content that can be referenced and shared with our audiences that can include best-practice case studies, multimedia presentations and concrete lesson plans. Although the referenced material is made available in a range of languages, these can be easily translated with a variety of translation tools such as the [European Commission's e-translation program](#), the translation tool for Google Docs, Deeple, etc. The curated material for each focus area is not meant to serve as curricula or coursework; rather, references are offered as a resource that teachers can effectively incorporate as an introduction to blue education into their classroom learning, providing students with a more comprehensive understanding of related issues and their importance to the environment and society. The repository of references can serve as an invaluable resource for primary-school and secondary-education teachers to create lesson plans for targeted subjects.

Thematic Topics and Their Sub-Subjects:

A **Guide for Teachers** page is hosted on the SHORE Community Platform at <https://shoreedu.com> that references materials created as teaching routes by the SHORE workpackage WP2 Team members, consisting of the seven country hub representatives. All five thematic topics are organized under clear headings, with the corresponding documents that represent sample teaching routes uploaded beneath each one. These are hosted on the platform, and can be accessed via the following links:

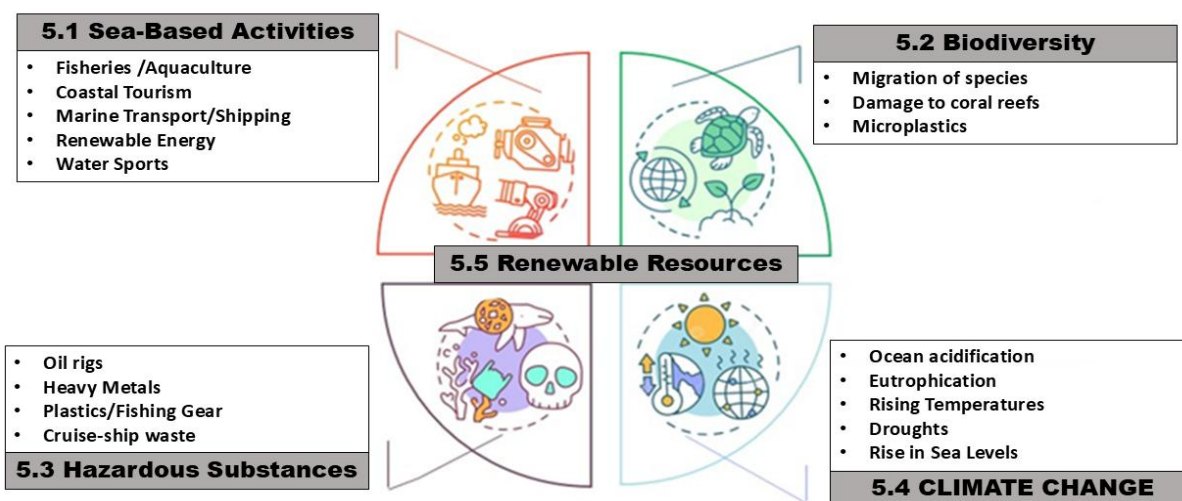


Figure 5: Overview of SHORE Focus Topics

5.1. Sea-Based Activities 	• Fisheries and Aquaculture • Coastal Tourism • Marine and River Transport and Shipping • Biotechnology • Water Sports
Sample Teaching Route	A Balanced Aquatic Ecosystem (Grades 10–12) Link

5.2. Biodiversity 	• Species Migration • Damage to Coral Reefs/Riverbeds • Microplastics Uptake by Aquatic Animals • Erosion and Flooding • Preserve Biodiversity in Waters • Invasive Species	
Sample Teaching Route	Nature's Neighborhoods (Grades 2–3)	Link
5.3. Hazardous Substances and Marine Litter 	• Oil Rigs • Heavy Metals • Plastic Pollution / Microplastics • Waste from Cruise Ships • Waste from Cities • Fossil Fuel Exploration	
Sample Teaching Route	From Can to Land (Grades 10–12)	Link
5.4. Climate Change 	• Acidification of Water Bodies • Eutrophication • Rising Temperatures • Drought • Rising Sea Levels • Fossil Fuel Exploration	
Sample Teaching Route	Shifting Sands (Grades 4–5)	Link
5.5. Sustainable Use of Water Resources 	• Renewable Marine and Water Energy • Nuclear Power Plants on Shores • Drinking Water • Drought • Food from Marine and Freshwater Environments	
Sample Teaching Route	Intro to Blue Economy (Grades 10–12)	Link

6. OUTLOOK

Blue Skills: Preparation and Participation Processes (Train & Take Part)

The Next 24 Months

The SHORE Project, as aligned with the EU Ocean Mission's goal to "Restore Our Ocean and Waters by 2030," aims to empower educators and students in five targeted regions to become active stewards of marine and freshwater environments. Over the next 24 months, seven SHORE country hubs in Austria, Estonia, Hungary, Italy, Poland, Romania and Turkey will provide support to teachers in primary and secondary education, as well as HEI pedagogical students, actors in the Blue Economy and community groups, equipping them with references to content, materials, and training necessary to raise awareness and integrate Blue Literacy into classroom instruction directed to students ages 7-18. The activities sponsored under SHORE's workpackage WP2, "Blue Skills: Preparation and Participation Processes (Train & Take Part)", go hand-in-hand with the other six workpackages to provide a comprehensive framework to promote Blue Literacy, orchestrated by SHORE's country hubs, community platform, website, the Ocean Helix and open calls while efforts are supported to encourage schools to join the NEBS.

By fostering a deep understanding of the challenges facing Earth's oceans and rivers, the need for promoting sustainability practices, and the critical importance of conservation, SHORE as a Horizon "sister" project will create a ripple effect that reaches beyond the classroom. A repository of resources has been created enriched with scientifically-backed resources, interactive digital content, and hands-on activities designed to engage students in meaningful, experiential learning. Teachers will receive specialized guidance in their native language to deliver these materials effectively, ensuring that students are not only informed but also inspired to take action.

Furthermore, the project will promote the use of open-schooling methodologies, encouraging schools to collaborate with local communities, scientists, public bodies,

NGOs and actors in the Blue Economy, as well as with teachers across borders. This approach will help create a dynamic European-wide learning environment where students can apply their knowledge in real-world contexts, fostering a sense of responsibility and ownership over the future of our oceans.

Throughout the next 24-month period of the project, SHORE will continuously evaluate and refine its strategies, ensuring wide-spread dissemination about sponsored events and referenced materials and methodologies remain relevant, impactful, and accessible. By the conclusion of the project, we aim to have established a robust framework for Blue Literacy that can be adopted by schools across the geographic areas of interest to Horizon Europe, contributing significantly to the broader mission of restoring our ocean and waters by 2030.

7. CONCLUSION

SHORE is aligned with the principles and objectives of the "Mission Ocean 2030," which aims to restore and protect our oceans and waters. By focusing on the urgent need to address marine and freshwater ecosystem degradation, SHORE is committed to empowering youth and educators to become proactive agents of change. The project's multi-faceted approach—integrating educational initiatives, community engagement, and international cooperation—ensures that ocean literacy is not only promoted but also effectively applied across different educational settings and regions.

Through its structured framework, SHORE facilitates a comprehensive understanding of ocean and water issues, encouraging schools to incorporate blue economy principles into their curricula. The project supports the Mission Ocean 2030 by driving local and global actions to achieve sustainable development goals and fostering a sense of responsibility towards our shared aquatic environments. By leveraging regional hubs and fostering connections within the European Blue Schools Network, SHORE is instrumental in advancing the mission's objectives and creating a lasting impact on the health and sustainability of our oceans and waters.



SHORE

Empower students as agents of change

ANNEX I- REPOSITORY OF RESOURCES

REPOSITORY OF RESOURCES

References cited for each of the five SHORE focus areas

GOAL: Create a repository of teaching and learning resources that can be made available to schools via the SHORE country hubs

Country hubs were asked to reference materials for the five SHORE focus topics that have been researched and reviewed so as to be recommended for use in formal education at the primary and secondary-education levels as well as in non-formal learning environments

TOPICS:

5.1 Sea-based activities:
Fisheries and aquaculture; coastal tourism; marine and river transport/shipping;
biotechnology; water sports

RESOURCE TITLE	DESCRIPTION
Waste Not, Sea More	SHORE FLICK fisheries/food waste for students ages 7-10
Waste Not, Sea More	SHORE FLICK fisheries/food waste for students ages 11-14
Waste Not, Sea More	SHORE FLICK fisheries/food waste for students ages 15-18
Training course for teachers	Train-the-trainer course providing easy-to-use background information, will enable teachers and trainers to support the guidance provided by the Blue Career Pathway tool and the BlueGeneration game
EU Aquaculture Assistance Mechanism	Brochure to uncover the benefits & importance of sustainable aquaculture
Site visit of Baltic mussel farming enterprises	Explore mussel farming, a practice that is a significant part of aquaculture that contributes to the production of seafood in a sustainable and controlled manner
GUIDE TO REGENERATIVE OCEAN FARMING: Crash course in	Regenerative aquaculture involves the cultivation of marine organisms such as seaweed, mussels,

regenerative ocean farming, choosing the right place for a plot, and setting up an ocean farm	oysters and other shellfish in a way that is not only sustainable, but also actively improves the marine environment
Intro to Game Design - Teacher Guide	Guide for teachers that want to design their own games, on any topic
How Do Ocean Currents Work?	Video about the ocean currents
Mareopoli	The game is inspired by Hasbro's famous MONOPOLY ® is team-based and builds up competition between players who must be able to answer questions and remind concepts to win the game. The main topic is tides, both from a scientific and a historical point of view. Thanks to this game the historical evolution of tides theory and of their calculation can be reconstructed from Aristotle's theory to Laplace's equations.
Boat-building challenge	Use aluminum foil to make boats and then test designs by seeing how many pennies or paperclips they can hold.
Blue Society	Informing on Blue Society, communication about policies, animated web series, short film, quiz, activity sheets
Wageningen University Fisheries and Aquaculture lessons	In order to produce food in a sustainable way for an additional 2 billion people by 2050, a business-as-usual approach will not be sufficient. This is especially true in the face of climate change and other forces threatening natural resources like biodiversity, land and water that are essential for food production and agriculture, including forestry and fisheries
Biopharmaceutical Technology Center	Biotechnology in the world of medicine
Platform that integrates dynamic experimental simulations with background curriculum and social networking	Created at Harvard University with support from the Amgen Foundation, digital tool makes high-quality science education accessible and gives learners and educators, everywhere, the courage to chart a meaningful path in science—for free
Ocean Sustainability through Education and sports	Resources about water sports, ocean literacy as well as marine education
"All about fish" Unterrichtsmappe "Rund um den Fisch"	Chargeable teaching folder with lesson plans about fish for teachers. The folder is divided into the following sections: Basic knowledge, practical

	section, practical material and appendix with overhead transparencies and a dissection guide for professionals
"All about crayfish" Unterrichtsmappe "Rund um den Flusskrebs"	The folder offers comprehensive information on the crayfish found in Styria, their way of life and biology and provides practical and ready-made teaching materials for copying
Exkursionen am Bach und Fluss	Streams and rivers are an important part of the water cycle. They not only shape and form the landscape but also provide a home for many often-endangered animal and plant species. Water bodies are among the most species-rich habitats. Nevertheless, life in the water usually remains hidden. With a few tips and the help of our working materials, you can easily organize a stream excursion yourself and explore the animal world in the water
Thema Überfischung: Wie mein Vater für die Zukunft fischt - vom Marine Stewardship Council	The Marine Stewardship Council's portal for pupils describes that sustainable fishing means leaving enough fish in the sea so that young fish can always regrow. It is also about minimizing damage to the seabed, plants and other marine life. Furthermore, it means ensuring that the people who depend on fishing retain their source of livelihood
Meere und Ozeane - Arbeitsblätter und Unterrichtsmaterial	This site serves as a repository for teaching material for primary, lower and upper secondary pupils and teachers
	The Ocean Literacy Scope and Sequence for Grades K–12 is an instructional tool that provides guidance to educators to help their students' achieve a full understanding about the ocean in ever more complex ways across years of thoughtful, coherent science instruction
	INeS Danube is an e-learning platform open to all interested. It provides a modern form of education in the field of logistics on inland waterways in the Danube region with particular reference to intermodality. The platform caters to the needs of different target groups, whether pupils or students of educational institutions focusing on logistics, practitioners like shipping companies or the manufacturing industry
University of Vienna Children's Office Platform	kinderuni.online is a platform containing scientific content accessible to children anywhere and at any

	time. A selection of non-German-German contributions also allows children with other first languages to participate. The platform is aimed at 7 to 13 year olds
Fisheries and Acquaculture	FAO FishStat is the leading source of global fishery and aquaculture statistics and provides unique information for sector analysis and monitoring. FAO also develops and promotes standards, methods and tools for collecting data in fishery and aquaculture and supports member countries enhance their capacities on statistics related to the sector
Rohstoffe und Energie	The topics address who controls the sea, how energy can be extracted from the sea and which resources can be found in the seabed
Basiswissen	In order to show young people the global extent, dimensions and interrelationships of the individual subject areas, their knowledge of the location, size and use of the oceans will be consolidated and expanded.
National Film Board of Canada	Shipping on the St. Laurence
Tengerek, óceánok	Sea-related activities for children
Tengerek, öblök	Sea-related video for children
Rybołówstwo - scenariusz lekcji	Material for teachers posted on the Integrated Education Platform of the Ministry of National Education - lesson scenario with PDF file
Wyhodowane w UE - zdobywanie wiedzy o europejskiej akwakulturze	The Growing in the EU - gaining knowledge about European aquaculture - result of school project. The Growing in the EU school project aims to raise awareness of this economic sector among students, especially in the context of their communities. It is also intended to help them learn about food production, the environment and the various business and career opportunities in the aquaculture industry
Kierunki rozwoju turystyki morskiej na Morzu Bałtyckim	Directions of development of coastal tourism in the Baltic Sea - article for secondary students and teachers
Turystyka Morska (Encyklopedia Zarządzania)	The article discusses coastal tourism, which includes travel by ship, ferry, yacht and coastal shipping. Various forms of coastal tourism are described, such as high seas tours, sailing, kayaking and underwater

	tourism. The article also presents the determinants of the development of coastal tourism, such as the increase in the wealth of society, the motivations of tourists and political factors. The characteristics of different types of sea voyages and the benefits of developing sea tourism are also discussed
Transport wodny i jego znaczenie	Material for teachers posted on the Integrated Education Platform of the Ministry of National Education - Water transport and its importance
Akwakultura	Youtube video on aquaculture - episode 84 of Oceanic guidebook
The making of a GMO crop	Students will compare and contrast methods of selective plant breeding, describe the scientific process of creating a genetically modified plant, compare genetically modified soybean seeds to conventional soybean seeds, describe the impact weeds have on plant growth, and understand how a genetically modified seed can help farmers manage weeds
The Role Of Aquaculture on Coastal Zones	Co-Exist Project
The Adventures of SPLASH the Llife jacket	sample lesson plan grades 1-2
A BALANCED AQUATIC ECOSYSTEM - Integrating Aquaculture and Hydroponics to Create a Sustainable and Mutually-Beneficial Environment for Both Plants and Fish	sample lesson plan grades 10-12

5.2 Biodiversity:

Migration of species; damage to coral reefs and riverbeds; microplastics uptake by aquatic animals; erosion and flooding; preserve biodiversity in waters; alien species

RESOURCE TITLE	DESCRIPTION
Blue Mission AA Ocean Literacy Booklet	Educational resource dives deep into Marine Protected Areas, ocean habitats, and how to help ocean restoration and conservation
Discover Primary Science and Math STEM Series: Episode 1 - Ocean Literacy	Irish marine territory / biodiversity species identification
Seven Ocean Need-to-Knows: the Ocean Literacy Principles	Youtube videos curated by the Ocean Exploration Trust (OET) and the Nautilus Exploration Program aboard the Nautilus research vessel
The Living Element - Nekton	E-Aqualex Aquatic Sciences e-learning toolset
Lakeland	This fun game teaches students how to build their town while preserving the health of the lakes. Students explore complex interactions between population growth, agricultural practices, land use change, fertilizer application, algae blooms, weather, and human happiness
Game of the Octopus	The Game of the Octopus is inspired by the Game of the Goose, which has very ancient origins (second half of the 16th century) and adds scientific content on marine environment topics in the form of questions
Collection of resources	Online courses, crafts and printables, curriculum for teachers, video lessons
Dive in to Sanctuaries	Games, coloring pages, and fun activities to help you learn about the national marine sanctuaries
The Black Sea Box	Theoretical content for teachers, activities, sheets, experiments
Aquafilm - what's beneath the water	Art & craft activity for kids, related to biodiversity
Plastic	Plastics Pollution infographic
Plastic	Plastic in the ocean: the facts, effects and new EU rules

Damage to corals and riverbeds	Causes of biodiversity loss in coastal ecosystems
Freshwater biodiversity loss	Bending the Curve of Global Freshwater Biodiversity Loss: An Emergency Recovery Plan
Nos. 1 & 2 Volume LIV, Our Ocean, Our World	UNITED NATIONS: Marine Biodiversity and Ecosystems Underpin a Healthy Planet and Social Well-Being
Invasive and protected species	MINKA Citizen Science
Aquarium field trip preparation	Ocean Scientists & Ocean Champions Educator's Guide
Lessons	Khaled Sultan Living Oceans Foundation
Teacher guide	Friends of the Earth Bahamian Ecosystems and Species
Virtual reality app for coral reef ecologist in training	University of Miami Virtual Reef Expedition
Interactive resources	
Our Seas	WWF School Resources describing our oceans. Activities included
WWF School resources	Main page for WWF.uk school resources
Italian Ministry of Instruction	A series of material books and videos about biodiversity for different school grades
Fauna around the pond	In 5-6 interactive teaching units, pupils learn about animals in and around the pond
Our Commonwealth Ocean: Teacher Education Pack	The resources are designed to be flexible and adaptable for use in a variety of settings. There are links to curriculum subjects and Core Skills, Commonwealth Values, and Sustainable Development Goals, along with suggestions of activities that you could carry out with a national or international partner school
Wasser ist Leben: Arbeitsheft für Schülerinnen und Schüler	various worksheets ready to use containing information and questionnaires
Leben im Meer	The topics address the variety of species living in the ocean as well as coral habitats

Our Planet II	Migration as a survival strategy - views migratory patterns on Earth by months. Includes excellent focus on plastic pollutions impacting species migrations
Introduction to Marine Biology	This course is about life in the oceans, from the sunlit surface to the inky depths, from microscopic phytoplankton to the great blue whale
National Film Board of Canada	Coral reefs
The Danube box	Danube-related handbook for teachers
Tengeri életközösségek	Marine community study video for children
Biodiverzitás	The importance of biodiversity
Bioróżnorodność	Youtube video, episode 146 of Oceanic non-guidebook
Podróż Pełna Wyzwań - migracje zwierząt	Article for youth about different sea species migrations in Polish
Sea trout - Pstrąg Morski	Youtube video in Polish about Sea Trout and its migrations, episode 147 of Oceanic Non-guidebook
Rafy koralowe: dlaczego są tak ważne?	An article that takes a closer look at the fact that coral reefs protect coastlines by acting as natural barriers that dissipate wave energy and protect against erosion and storms.
Alarmujące odkrycie na Antarktydzie – pingwiny kąpią się w wodzie z mikroplastikiem. Jak walczyć z wszechobecnymi drobinami?	Article at "water issues" on Alarming discovery in Antarctica - penguins bathe in water with microplastics. How to fight the ubiquitous particles?
Powódzie i bioróżnorodność	Open access Article in "Wild Life" monthly wildlife conservation magazine about flooding and biodiversity
My Penguin Friend movie activity guide	My Penguin Friend is a tale that traverses the magic of the ocean, the beauty of nature, and the transformative power of love
The Essential Principles and Fundamental Concepts of Ocean Sciences for Learners of All Ages	Exploring the seven ocean principles
National Geographic Kids	Learn about the different natural environments of plants and animals.

San Diego Zoo Alliance	Habitats by categories
Jack Hartmann Kids Music Channel	Habitats
NATURE'S NEIGHBORHOODS: Discovering Habitats and the Web of Life	Sample lesson plan, grades 2-3
ARTIFICIAL CORAL REEFS - contributions towards restoring marine ecosystems	Sample lesson plan, grades 9-12

**5.3 Hazardous substances and marine litter:
 Oil rigs; heavy metals; plastics and microplastics; various wastes from cruise ships;
 various wastes from cities; fossil fuel reserve exploration**

RESOURCE TITLE	DESCRIPTION
Plastic PANDEMONIUM	SHORE FLICK about plastic pollution for students ages 7-10
Plastic PANDEMONIUM	SHORE FLICK about plastic pollution for students ages 11-14
Plastic PANDEMONIUM	SHORE FLICK about plastic pollution for students ages 15-18
Marine Litter E-learning module	The e-learning module consists of a series of topics about the marine environment for young people. Each topic is developed in a brief presentation or a short video. In addition, there are quizzes, tasks and suggestions for outdoor or in-class activities. The materials in the module can be used on their own or as part of short online or in-class courses. They will be further enriched with new tasks and transations as e-learning courses are developed as part of the project
Marine Litter Educational pack	Within MARLISCO the educational material “Know Feel Act! To Stop Marine Litter” has been prepared to inform, sensitize and enable European teachers and students to take action to tackle the problem of litter in our seas and coasts. The material contains 17 activities, each combining a learning activity part (4 pages) and a worksheet for students (1 page). The activities are self-standing and can be applied separately or combined in clusters, so to meet the needs of the educator
Oils spills and pollution	Activities about protecting and restoring waters from pollution
Understanding marine debris	Videos, stories, puzzles, coloring books, lesson plans, and other great resources from NOAA's Marine Debris office

Cruise Ship Report Card	Friends of the Earth's Cruise Ship Report Card ranks 18 major cruise lines and 213 cruise ships according to four environmental criteria: Sewage Treatment, Air Pollution Reduction, Water Quality Compliance and Transparency
A Plastic Ocean	This documentary shows the gigantic accumulation of floating plastic debris in the oceans and highlights the consequences of this form of pollution on the marine environment. This film is 2016 but probably still to date, the most successful documentary on the scale of the environmental disaster that affects all the oceans of the globe
Teaching materials and worksheets for teachers	Plastic Pirates Campaign
	Open University of the Netherlands MOOC on Marine Litter
Oceans and Plastic Pollution	WWF course material on oceans and plastics
Tim&Trixi "The Movie"	Follow Tim & Trixi Tropf on their fascinating journey from a rain cloud over the mountains of Lower Austria and Styria through Vienna's water pipes to the federal capital. After an adventure in the bathtub, Tim & Trixi discover the Viennese sewer system until they end up in the ebswien sewage treatment plant in Simmering. There they become clean again and rise from the Danube Canal as steam to the clouds
Water: Filtration and purification	This 2-4 teaching unit centers on the technical problem of purifying water using filters. Today's filter technology is very advanced and can be used to remove impurities down to the nanometer range
Reduce, Reuse, Recycle	The educational material Reduce, Reuse, Recycle encourages pupils from 12 years onwards to constructively discuss possible solutions to the plastic crisis. The material is activity-based and structured according to the triad of recognize, evaluate and act established in "Education for Sustainable Development" (ESD)
Unterrichtsmaterial "Trinken und Gesundheit"	The folder contains information on water and how it affects health and performance, as well as on drinking water supply in Austria, the availability of clean drinking water worldwide and different types of beverages. The practical section contains a wide

	range of practical activities such as demonstrations, tastings, experiments and worksheets
Arbeitsblätter und Experimente für den Unterricht	Various ready to use worksheets and experiments for primary to upper secondary schools
Bedrohung und Schutz der Meere	The topics span from the history of water pollution to nuclear waste in water to toxins in the food chain
Meeresverschmutzung	The worksheets address the effect of rising sea levels and how it affects the lives of humans and animals.
Vízszennyezés	
The Danube box	Danube-related handbook for teachers
A vizek szennyezése	pollutants, waste water treatment
Vízszennyező anyagok	A brief introduction to pollutants for younger people
Czy Bałtyk jest czystym morzem?	Youtube video in Polish related to topic "Is the Baltic a clean sea?" - episode 173 of Oceanic Non-guidebook
"Rtęć w chorych rybach?"	Youtube video in Polish related to topic "Mercury in diseased fish?" - episode 134 of Oceanic Non-guidebook
OCEAN – OD KOLONII DO GLOBALNEGO NARODU	Article in Green European Journal on "OCEAN - FROM COLONY TO GLOBAL NATION" with focus on fact that The oceans have absorbed 1/4 of the man-made carbon dioxide since 1750, contributing to their acidification
Co się dzieje z odpadami na statkach wycieczkowych? Tu nie jeżdżą śmieciarki	Article on: What happens to waste on cruise ships? This is where garbage trucks don't go
Ocean on drugs	Youtube video in Polish related to topic "ocean on drugs?" - episode 108 of Oceanic Non-guidebook related to information on how drugs end in seas and oceans – sources
How does Fracking work?	TED-Ed animated video explains how hydraulic fracturing, known as fracking
Plastic Pirates	Worksheets and materials about plastic for teachers

UNLOCKING ANCIENT ENERGY FROM DEEP WITHIN THE EARTH - Energy Sources That Come from Plants and Animals Buried for Millions of Years	Sample lesson plan, grades 3-4
FROM CAN TO LAND: Exploring the Lifecycle of Aluminum Cans and the Impact of Heavy Metals	Sample lesson plan, grades 10-12

**5.4 Climate Change:
Water-body acidification, eutrophication, rising temperature;
droughts; rise in sea levels**

RESOURCE TITLE	DESCRIPTION
<u>A Handbook for Increasing Ocean Literacy - NMEA</u>	Use of conceptual flow diagrams facilitate the development of learners' conceptual understanding and organization of ocean sciences ideas embodied in the seven Essential Principles of Ocean Literacy
UNESCO Ocean Literacy: The Essential Principles and Fundamental Concepts of Ocean Sciences for Learners of All Ages (2020)	represent content that does not fall neatly within traditional science disciplines, but rather supports a focus on integrated science
Encounter Edu STEM and global learning We specialise in producing live lessons on global topics for the classroom	Free science teacher resources for addressing environmental and societal issues in the classroom across all ages, key stages and grades.
	MOOCs and courses
Food & Agriculture Organization of the UN - Climate change risks to marine ecosystems and fisheries	How climate change is altering marine fisheries worldwide
Climate action board game	General climate action behaviours
Solutions to Climate Change game	In this interactive fortune-telling game, students explore four potential solutions to climate change and get their "fortunes" read using informational "Tarot" cards about empowering girls and women, eliminating food waste, using more renewable energy, and switching to plant-rich diets. Students will watch a short video about each solution, choose the solution they think is the best, and answer questions to see if the solution they chose aligns with their answers
Ocean acidification and dry ice	Explore the chemical reaction between frozen carbon dioxide (dry ice) and water and compare this to

	changes that are occurring in ocean ecosystems, as excess carbon dioxide in the atmosphere is absorbed by the ocean
Essential Principles of Climate Science	Are you ready to discover your changing world? This free activity book will introduce you to The Essential Principles of Climate Science, help you learn about Earth's climate system, the factors that drive and change it, the impacts of those changes, and what you can do to explore, understand, and protect our Earth. Download the full activity book or individual activities below. Have Fun!
What is Ocean Acidification?	An easy to understand description of ocean acidification
How do we measure sea level?	NASA explains what sea level rise is
Sea Level Rise By Decade: Student Activity	For over 20 years, satellite instruments have measured the sea surface height of our ever-changing oceans. This line plot and video show the patterns of rising and falling ocean levels across the globe from the 1990's to the 2010's
Data Jigsaw: Exploring Sea Level Rise with Others	This activity is perfect for practicing analysis of data related to Earth Materials and Systems as we help students in grades 6-12 use models to recognize patterns in data. Students will analyze four data visualizations focused on the topic of sea level. They use a jigsaw method to explore and communicate their findings to their peers. They will also practice constructing evaluations from evidence and communicate their findings to others
How Melting Ice Causes Sea Level Rise	You might have heard that melting ice contributes to sea level rise. But it makes a difference whether that melting ice is on land or in the sea. Make a prediction about what each type of ice will do to the level of water in a container. Then build a model to compare what you predicted to what you observe
Stability and Change: Monitoring Sea Level	Students analyze the stability and change of sea level after watching a visualization of sea level height around the world
How do we know the climate is changing?	Scientists have been observing Earth for a long time. They use NASA satellites and other instruments to collect many types of information about Earth's land, atmosphere, ocean and ice. This information tells us that Earth's climate is getting warmer

Trash and climate change	Activities about trash and the 3Rs (Reduce, Reuse, Recycle)
Modeling Climate Change	Intended for non-specialists, this course starts with basic principles and builds to more complicated, realistic models of the Earth's climate
Our Ocean, Our Hero	
Subject to Climate	Tools needed to deliver a standards-aligned lesson to students.
Champions for the Sea	Takes children on a journey through the history of the Race, exploring the boats, teams and route, before explaining our connection with the ocean and the issue of plastic pollution and how we can tackle it. There is also a module about the wonders of ocean science and the challenges of studying its vast, unexplored depths
Generation Ocean	Resources introduce young people to the incredible role that the ocean plays in sustaining all life on Earth and highlights the threats that are jeopardizing this vital system, along with the solutions that are needed to protect our blue planet
Open University MOOCs	explains how this process occurs, what its effects on different types of habitat are, and how it might be managed
University of Edinburgh	Eutrophication hotspots across the world Eutrophication in freshwater
	Actors in the eutrophication and agriculture value chain
UN System Staff College	Digital 4 Sustainability Learning Path
Wasser sparen - Tipps für einen verantwortungsvollen Wasserverbrauch	In 5-7 teaching units, pupils examine the importance of drinking water and the scarcity of water due to climate change, rising living standards and population growth
Der grüne Wal: Bildungsmaterial für den Klimaschutz	The aim of this brochure is to explain the topic of climate change to pupils, teachers, educational professionals and all other interested parties and to provide suggestions for taking immediate action. There are a number of contradictory claims and theories surrounding the topic of climate change. In order to counteract false assumptions and scientifically unsubstantiated criticism, primary scientific sources for the content conveyed in this brochure have been listed

Wasserwerkstatt - Klima und Wasser	This information brochure is dedicated to the topic of climate change in connection with water: How does climate change affect the resource of water? What does global warming mean for our rivers and lakes and their inhabitants? And how does this relate to our drinking water?
Ocean Literacy for all: a Toolkit	The toolkit contains both information and activities and provides a comprehensive overview of relevant topics
Frozen in the Ice: Exploring the Arctic	MOOC critical challenges the Arctic faces under a changing climate and how these changes impact our lives in the mid-latitudes
National Film Board of Canada	The problem with plastic
The Danube box	Danube-related handbook for teachers
Kreatívan a klímaváltozásról – tanári kézikönyv	Lesson plans on sustainability and climate change for classroom teachers and substitutes in grades 9-12
Change the story	Lesson plans on sustainability and climate change
Handbook for increasing ocean literacy – NOAA	
"Zakwaszanie wody morskiej"/"Seawater Acidification"	Youtube video in Polish related to topic "Seawater Acidification".- episode 103 of Oceanic Non-guidebook related to information on how drugs end in seas
"Dlaczego zimną najcieplej jest nad morzem?"/"Why is the cold weather warmest at the seaside?"	Youtube video in Polish related to topic "Why is the cold weather warmest at the seaside?".- episode 96 of Oceanic Non-guidebook related to information on how climate change and why winters are not that cold at the seaside
"Zmiany klimatyczne w Polsce"/"Climate Change in Poland".	Youtube video in Polish related to topic "Climate Change in Poland". episode 107 of Oceanic Non-guidebook related to information on climate changes in Poland and its impact on Baltic Sea
Wpływ zmian klimatu na Bałtyk	Article on Impact of climate change on the Baltic Sea. The Baltic is a relatively shallow sea, not very salty, enclosed and less diverse than other seas. In addition, all the countries around the Baltic are developed, heavily industrialized. Therefore, the man-made natural changes in this body of water can be observed here much faster than in the oceans

"About 18% - this is the area of dead zones in the Baltic Sea. Approx. 28% - this is the area of hypoxic zones in the Baltic"	Article prepared by WWF on eutrophication. The phenomenon of eutrophication, a dangerous overfertilization of water, is followed by the formation of so-called oxygen deserts, in which the life of fish and other aerobic organisms is hindered
Eutrophication as a natural phenomenon occurring in the aquatic ecosystem	Interactive simulation on the Ministry of Education's Integrated Education Platform
One Earth Perspective	A Roadmap for Using the UN Decade of Ocean Science for Sustainable Development in Support of Science, Policy, and Action
SHIFTING SANDS - How Sea-Level Rise Is Changing Our Coastlines	Sample lesson plan, grades 4-5

5.5 Renewable use of water resources: renewable marine and water energy, nuclear power plants on shores, drinking water, food from sea and water

RESOURCE TITLE	DESCRIPTION
Thirsty Planet	SHORE FLICK for 7-10 year olds about water scarcity
Thirsty Planet	SHORE FLICK for 11-14 year olds about water scarcity
Thirsty Planet	SHORE FLICK for 15-18 year olds about water scarcity
Ocean Multi-Use	Submarine MOOC regarding real-world examples of multi-use sites in action, alongside discussions on other space-efficient offshore energy solutions
E-Aqualex Aquatic Sciences e-learning toolset Part I and Part II	The food chain
Water Cycle Game	This game allows students to move water molecules through different locations and states of matter using the processes of the water cycle. The goal of the game is for students to earn points by getting their water molecules to the "goal zone" using the natural processes on the game cards. The team with the most points wins
Ocean Odyssey - Educators Guide - Elementary School Level	A collection of information and activities on different ocean topics
SDGAcademyX: One Planet, One Ocean	holistic view of how the ocean functions, how human interactions with the ocean can be understood, and what solutions are available to support both sustainable use and stewardship of our blue planet
University of Manchester	Pressurized water reactor using nuclear fission
Britannica for Kids	Intro, structure, technology, control of nuclear energy
Britannica for Kids	Nuclear energy, weapons, power plants
The Danube Box	A wide range of information on ecology, geography, wildlife, cultural diversity and everyday life in the past and today in the Danube countries

Water Productivity in Practice	online course targeting practitioners and academicians who are working in agriculture and related fields. They are also interested in conducting water productivity and/or water accounting analyses, including to study how water productivity improvements can have an effect on different water users in a river basin context
water management	Water Works: Activating Heritage for Sustainable Development
Ocean Race	Ocean Race education project for ocean sustainability
Viveraqua Academy	Veneto-based water utilities have collected videos, courses, games and other educational projects on integrated water service because they believe it is important for everyone to understand how the process that takes water, brings it into homes and returns it purified to the environment works. Through these educational projects, you will discover how to do your part to protect water
WWF Italia	Italian WWF program for schools with interactive games
WWF School Resources	Informative pdf designed for teachers about freshwater resources on the planet, Activities included in the doc
Italian Ministry of Instruction	A series of material books and videos about water for different school grades
Unterrichtsmappe Experimentierwerkstatt Wasser. Das Wassermolekül und seine Eigenschaften	The folder is aimed at teachers of grades 1 to 6 who want to provide pupils with basic knowledge about the properties of water by facilitating "learning through research and discovery" and by means of simple experiments
Unterrichtsmaterial "Der Wasserkreislauf"	The connection between clouds, rain and the flow of water is the focus of this teaching folder. The same applies to the topics of water resources, drinking water supply, water disposal and water protection. The practical section contains a variety of exercises, worksheets, diagrams, picture cards, experiments and examples of methods for implementing the topics in the classroom
Dieses Mädchen verbringt 8 Stunden mit etwas, für das wir nur Sekunden brauchen!	"A day in the life of..." video: Aysha (13) takes us on her long journey to the water. By the time we wake up in Europe, Aysha has already been on the move in Ethiopia. It takes her a total of eight hours to fetch water for herself and the whole family from the distant river

Lerneinheiten rund ums Wasser	This site serves as a repository for teaching material for primary, lower and upper secondary pupils and teachers
	These 4 worksheets contain information for primary school pupils about water in the global context and how to protect and preserve water. Two of the worksheets focus on the specifics of the water supply in Vienna
STEM Learning	Repository of various lesson plans for all STEM subjects
Aqua MOOC - Participatroy Engagement with water	This MOOC aims to provide general information on the topic of water and highlights the impact humans have on the environment
Lernort Gewässer	Repository: Experts from the Bavarian environmental administration, practitioners from all types of schools and specialists at the State Institute for School Pedagogy and Educational Research have jointly developed working materials and background information for project-oriented, interdisciplinary teaching
Forum Umweltbildung	Repository with various topics and methodologies
The Danube box	Danube-related handbook for teachers
Vízenergia	presentation of hydropower uses
Energia prądów morskich, pływów i falowania	Online article on "Energy of sea currents, tides and wave action"
Smart port	Youtube video in Polish related to topic "Smart port". - episode 101 of Oceanic Non-guidebook related to smart seaports.
"Jak Ocean nas żywi?"/"How does the Ocean feed us?"	Youtube video in Polish related to topic "How does the Ocean feed us?". - episode 12 of Oceanic Non-guidebook related to exploitation of water resources for food purposes
"Talerz"/"Plate"	Youtube video in Polish related to topic "Plate?". - episode 36 of Oceanic Non-guidebook related to what fish that we have on plate ate before we will eat it
"Jaka ryba na obiad?"/"What fish for dinner"	Youtube video in Polish related to topic "What fish for dinner". - episode 36 of Oceanic Non-guidebook related to Fish exploitation and the richness of the species base

Management of Integrated Coastal Zone in Europe	Coexist project blogpost
Toward a Common Understanding of Ocean Multi-Use	Frontiers in research paper
Nature.com	Two decades of research on ocean multi-use: achievements, challenges and the need for trans disciplinary
What is Ocean Multi-Use	Defines the types of maritime multi-use
Beyond Offshore Wind: Ocean Multi-Use Course	A course that aims to address the lack of easy-to-read sources on the topic of offshore renewables related ocean multi-use” – FLORES project
WHAT’S FOR DINNER? - Exploring the food pantry of Earth’s water bodies	Sample lesson plan, grades 3-5
INTRODUCTION TO BLUE ECONOMY MULTI USES - marine and coastal resources with multiple purposes	Sample lesson plan, grade 10-12



**D2.6 Blue Skills:
Preparation and Participation
Processes
(Train & Take Part)
Annex I**