



OSES

OCEAN SUSTAINABILITY THROUGH
EDUCATION AND SPORT

GOOD PRACTICES HANDBOOK

A benchmark of **educational tools**
and **environmental activities** already
implemented in Europe and beyond.



OSSES

OCEAN SUSTAINABILITY THROUGH
EDUCATION AND SPORT

**Sport and
Citizenship**  **Sport et
Citoyenneté**
Sport serving society Le Sport au service de la société

 UNIVERSITAT DE
BARCELONA

 SURFRIDER
FOUNDATION

 Ocean
As Common

LA VAGUE NORMANDE
LIAGE DE VILLE DE NORMANDE



 DAN
DIVERS ALERT NETWORK

 emsea

 begi • bistan

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Club Nàutic Garraf

Divers Alert Network Europe Foundation (DAN Europe)

European Marine Science Educators Association (EMSEA)

GPDESIGN Unipessoal Lda

Ligue de Voile de Normandie

Professional Association of Diving Instructors EMEA (PADI EMEA)

Surfrider Foundation Spain

University of Barcelona

More information on the OSES project at www.oses-project.org/



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WELCOM



The European Union (EU) has long been committed to protecting and restoring the natural environment, biodiversity, and natural resources. Under Article 191 of the Treaty on the Functioning of the European Union, the EU's environmental policy explicitly states its objectives, including preserving, protecting, and improving environmental quality and combating climate change.

In 2008, the European Parliament adopted the Marine Strategy Framework Directive (MSFD) as part of the EU's Integrated Maritime Policy (IMP). The MSFD aimed to achieve «good environmental status» (GES) of the EU's marine waters by 2020 and prevent further deterioration. While there have been notable improvements in some areas, challenges persist.



To address these challenges, the EU Biodiversity Strategy for 2030, aligned with the European Green Deal, seeks to protect and restore marine ecosystems. These initiatives align with global efforts, including the United Nations Agenda 2030 and the UN Ocean Decade 2021-2030.

Public awareness and education are crucial to all major ocean protection policies and programs. Ocean Literacy (OL), born nearly two decades ago, fosters an understanding of the ocean's influence on humanity and humanity's influence on the ocean. OL's goal is to create an ocean-literate society, empowering individuals to make informed decisions about the ocean.

Ocean Literacy is an interdisciplinary global initiative aimed at increasing awareness and knowledge of the ocean. It encourages dialogue, knowledge exchange, and collective action to reduce human impacts on the ocean. Engaging diverse stakeholders, including coastal communities and tourists, is essential for sustainable ocean governance.

Informal education programs, such as sports, play a pivotal role in advancing OL. These programs deliver curriculum-aligned content without curricular constraints. Collaborative efforts between formal and informal educators are vital for driving ocean literacy and promoting a deeper understanding of marine environments.

For more insights into the impact of sports on ocean preservation and literacy, consult the Report within the Ocean Sustainability through Education and Sport (OSES) project framework – Reference to the report.



Ocean Sustainability through Education and Sport (OSES)

Water sports offer humans a unique connection to the marine environment. As opposed to “leisure tourists” water sports enthusiasts take advantage of this unparalleled ecosystem all year round, and many times regardless of air and water temperature. This makes water sports enthusiasts highly susceptible to environmental degradation, be it from pollution hindering water access or shifting hydrological conditions disrupting their activities.

These enthusiasts often evolve into professional athletes, ocean advocates, or water sports business owners contributing significantly to local economies. Consequently, education and awareness among water sports practitioners at all levels of engagement are essential for protecting and improving our marine environment. Sports can be a powerful tool for fostering eco-responsible actions and environmental awareness. Activities like waste collection, biodiversity awareness, coastal preservation, and oceanic issue discussions can be seamlessly integrated into sports, and help create an ocean-literate community dedicated to safeguarding our waters.

The OSES project aligns with the broader goal of supporting education through sport. We believe that sports can play a pivotal role in educating youth about environmental protection. Addressing ocean preservation serves as a pilot initiative that can be expanded to other sports in the future.

Nautical sports, including surfing, sailing, scuba diving, and kayaking, have specific environmental concerns tied to marine area preservation. One unifying value across these sports is the imperative to protect their playground.

Sport, with its educational and exemplary values, has the power to raise awareness and drive behavioral change in environmental protection. The «green sport» dimension in the European Union's Work Plan for Sport emphasizes the sector's potential to combat climate change and become more sustainable.

OSES seeks to strengthen the role of sports actors in addressing ocean conservation through three dimensions:



Education for sustainable sport: Developing tools and methodologies to instill eco-responsible actions and environmental awareness in youth through sports.



Environmentally friendly sports practice, facilities, and events: Gathering expertise to integrate environmental aspects into all sporting activities, including events, competitions, and organizational management.



Evolution of sport and its practice in the context of climate change: Focusing on ocean health and preservation by addressing activities significantly impacted by ocean challenges such as pollution, coastal development, and water quality issues.

The OSES Good Practices Handbook seeks to compile impactful actions and projects across Europe and beyond, serving as a benchmark for environmental awareness and ocean protection education.

INSPIRING

Human behavior and attitudes toward the natural environment during water sports activities can exert a significant impact on marine ecosystems.

Although individual actions may seem minor, the cumulative effect of sports enthusiasts and physical activity programs can place considerable pressure on the environment. These behaviors are often linked to a lack of knowledge about the natural environment and limited awareness of our ecological footprint.

For instance, issues like noise pollution from sports events, physical damage to habitats caused by human presence and equipment, and disturbances to wildlife can lead to lasting changes in ecosystems. These alterations can diminish the value of these environments, disrupt ecosystem services, and reduce their appeal for both tourism and sports activities, which may negatively affect local economies.

To set a standard for environmental awareness and ocean protection education, we invited the public to share their projects and initiatives that aim to raise awareness and educate about the marine environment through sports or sports-related activities.

The projects featured in this section were collected through an online submission process between April 14 and August 1, 2023. Each project was voluntarily submitted by the contributing authors, who were actively involved in their development and success and retained rights to their projects. In total, we received 28 projects from Europe, 1 from Chile, Ecuador, and Lebanon with 25 of them meeting the criteria for inclusion in the handbook as exemplary practices that are not only worth sharing but also worth developing. The main requirement for project submission was a clear connection between water sports and education or awareness raising. As Ocean Literacy is a grassroots initiative, all related endeavors that seek to promote it and cultivate ocean-literate communities are considered bottom-up initiatives. Initiating change often begins with taking that crucial first step, especially when it comes to grassroots movements and the introduction of novel practices and approaches that aim to protect the marine environment and boost awareness. This perspective led us to conclude that no initiative is too small or too large to be showcased as a good practice.

G PROJECTS

The OSES Good Practices Handbook serves as a reference point for assessing our progress as a society in terms of connecting water sports with OL, environmental awareness, and marine education.

It caters to individuals at various stages of their journey toward a cleaner and more sustainable ocean.

The handbook offers a diverse array of approaches and initiatives, ranging from online platforms that merge marine education with snorkeling to advanced citizen science projects whose outcomes have been published in peer-reviewed scientific journals.

Our hope is that this handbook will inspire you to integrate ocean protection into your water sports activities or further develop existing initiatives. We encourage you to collaborate, nurture sustainable endeavors, and take the initiative to enhance the well-being of our oceans.



To facilitate navigation through the diverse range of submitted projects and initiatives, we have organized them into sections in this Handbook. This division, however, is just one way to categorize these projects and could be done differently. It's essential to remember that, like processes in the ocean, no project is entirely self-contained, and clear boundaries between initiatives may not exist. Similar to all human efforts aimed at creating a more sustainable future, project designs interconnect various approaches, utilize available resources, and adapt to local conditions. Consequently, each of the presented projects could potentially fit into multiple categories.



Introduction

The division utilized in this Handbook is primarily based on the central component of each submitted project that distinguishes it from other initiatives. In some instances, this component may be a target audience or stakeholder group involved in the activities, such as schools. In others, it could be the type of activity itself, such as data collection.

We encourage readers to explore all sections of the OSES Good Practices Handbook to gain insights into various approaches and initiatives and to understand how they are interconnected and interwoven.

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An alliance betw formal and non-

DLS,

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OCEAN LITERACY

Learning with snorkeling
and ocean literacy

SPORTS

Learning ocean stewardship
through surfing and paddleboarding

MARIS

Connecting scientific research,
informal education

The primary objective of the OSES project is to create tools for sports federations and local sports organizations to educate young people about eco-responsible actions and foster environmental awareness from an early age, using sports as a vehicle. Consequently, it is crucial to involve school-age children and schools in initiatives that offer students opportunities to learn about the marine environment, instill a sense of responsibility for its protection, engage in hands-on ocean conservation activities, and teach them how to interact with the environment sustainably.

An evident advantage of integrating water sports, ocean protection, and schools is the ability to reach large groups of young people regularly and consistently. It also ensures relatively equal access to such programs for all students attending schools, regardless of their financial or social background. Collaborating with schools also adds value to local communities through the involvement of water sports enthusiasts. Furthermore, working with children often encourages the participation of other family and community members, allowing these initiatives to extend their reach and amplify their impact.

In this section, we showcase projects that enable school students to learn about the marine environment and contribute to its protection through water sports. Some of these initiatives were initiated by water sports practitioners who partnered with schools, while others were developed by schools themselves. Regardless of their origin, these projects share a common objective: engaging school-aged youth in marine conservation efforts.

1

KIDS DIVE

SCUBA DIVING



TARGET AUDIENCE



Children 8-17 years old

Led by MARE-Marine and Environmental Sciences Centre / Ispa - University Institute

Diving Education Inspires Ocean Conservation in Youth

Kids Dive is a practical and educational program that introduces scuba diving to young individuals, fostering their commitment to ocean conservation. Since 2018, it has engaged over 2500 students aged 8-17, aligning with 5 United Nations Sustainable Development Goals: SDG 14 – Life Below Water, SDG 4 - Quality Education, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, and SDG 17 - Partnerships for the goals.

Groups of 60 school students engage in a 5-day Kids Dive program that immerses them in ocean education and scuba diving. The experience begins with a school presentation, followed by a scuba diving introduction. They participate in underwater educational activities and later delve into themed workshops covering plastic pollution, marine biodiversity, and climate change.

To illustrate the issue of plastic pollution, students swim through hula-hoops, one of which is covered with transparent plastic, which they usually can't see underwater and therefore are surprised when hitting



the « invisible wall ». This demonstrates how marine life can be impacted by underwater plastics. In the «Deplastify the Ocean» workshop, they learn about how marine creatures can mistake plastics for food, the varying properties of different plastics, and the growing problem of microplastics.

Marine biodiversity is explored through a simulated «kelp forest» in a pool, treated as a Marine Protected Area (MPA). Students release model fish into this environment and further delve into the topic during a workshop. They discover the ocean's role in mitigating climate change through algal communities and the importance of MPAs in marine ecosystem conservation.

The program continues with a field trip to explore local coastal marine life, a visit to the Lisbon Oceanarium (public aquarium), and a meeting with scientists.

Presently, this innovative program goes beyond scuba diving, featuring a digital learning tool and a citizen science project. Digital learning through virtual scuba diving using VR360 headsets emerged from a National Geographic project during the pandemic. It enables an immersive experience of «diving» into diverse underwater habitats that were filmed by the program creators with VR360 came-

ras. These include marine forests and reefs or shipwrecks teeming with life. A citizen science project is customized for local schools by our research team. This project includes small monitoring projects (based on our knowledge of the local fauna and flora) that enable teachers and students to follow local intertidal protected species, non-indigenous species (NIS), and/or commercially important species. They also follow species that are in their northern or southern limit of distribution while installing temperature data loggers (that we provide) in the intertidal to better understand the effects of climate change.

The intention is to expand this pioneering practical program nationally (Portugal) and internationally (already running in Norway). National and international projects have been pivotal for Kids Dive, while ongoing projects have gained traction from an increasing number of participant municipalities. Individual feedback helps measure program effectiveness, considering the different levels of ocean literacy.

This program aims to deeply engage and inspire young individuals, promoting sustainable and ocean-friendly lifestyles within their schools and families. We want to nurture the desire to safeguard marine ecosystems contributing to a proactive blue generation. Our motto is: #savetheocean.

<https://www.kidsdive.org/>



2

OCEAN DISCOVERABILITY

SAILING

TARGET AUDIENCE  disabled studentsLed by *The Island Trust*

Sailing Program Empowers Disabled Youth

Ocean Discoverability provides disabled children from Devon and Cornwall with the opportunity to experience day sailing aboard one of The Island Trust's traditional sailing vessels. The program is designed to create a memorable marine learning experience. The day starts with observing and interacting with marine life in the marina, followed by examining specimens under microscopes and via an underwater camera on the seabed. Safety instructions and boat familiarization are provided before the voyage commences.

The sailing journey begins by motoring down the River Plym to Plymouth Sound, during which ropes and fenders are stowed to help the young crew adjust to the boat's motion. Once in the Sound, participants who are willing help raise sails and steer the vessel.





This experience offers an understanding of geography, marine life, and other maritime activities. The crew engages in various tasks such as spotting and recording ships and boats, finding mystery objects on deck, word searches, sail area calculations, and knot tying. Some participants simply enjoy the sensory experience.

The return journey involves collecting plankton samples for microscopic examination upon returning to the marina. The program also includes motoring through Plymouth Sound to observe maritime activities and their impact on the landscape.

The group size varies based on the level of disability and the number of required helpers, with a maximum of 9 participants. Qualified and experienced personnel, including the skipper, mate, and onboard ocean educator, ensure a safe and enriching experience for young individuals with diverse disabilities. The hands-on activities of the day enhance motor skills, coordination, teamwork, and confidence.

The experience broadens horizons, elevates aspirations, and provides a tangible connection to the maritime heritage of the counties. Through assessment questions like “How much do you know about marine life and maritime activities?” at the beginning and end of the day, and “What did you gain from this experience?” the program evaluates the increase in knowledge and the intangible benefits such as improved independence, self-esteem, and abilities.



www.theislandtrust.org.uk

Contact us to get more information about our work :
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3

SME NA JEDNEJ LODI

«We Are on The Same Boat»

KAYAKING/CANOEING, SAILING 

TARGET AUDIENCE  Children 8-15 years old

Led by *No.1 Senica Junior Secondary School*

Engaging School Students in Water Conservation Initiatives

The project's aim is to engage students in environmental protection and conservation through outdoor activities, including water sports like kayaking and sailing.

At No.1 Senica Junior Secondary School in Záhorie region, Western Slovakia, we are dedicated to preserving water ecosystems. Belonging to the Black Sea and Baltic Sea basins, we run various initiatives and long-term environmental projects throughout the school year. These projects align with four annual calls, each with specific objectives:



- studying and conserving biodiversity in water ecosystems (Call of the Wild),
- cleaning up rubbish from water-bound areas (Cleaning the Banks),
- addressing climate change impacts (Red Alert),
- adopting nature-friendly habits (Green Watch).



Our activities include water bird watching while canoeing, crafting paddles from driftwood, boatbuilding and sailing on lakes and the sea, operating a mealworm farm, showcasing water treatment plants (biological cycles), studying water streams, providing toad transport (toad taxi), implementing water retention measures, downstream canoeing with riverbank cleanups, sea biology lessons at the shore, environmental theater, creating handmade bird glass stickers from waste materials, and more.

Student teams drive these initiatives and they culminate in a one-day campaign

called «We Are At The Same Boat.» The event, occurring during Earth Day celebrations, involves students, teachers, and volunteers from all five Senica Primary and Junior Secondary schools. Teams share their initiatives using peer-to-peer learning. The campaign highlights productive student research teams, rewarding them with an honor prize – a boat barrel. All teams collect badges for their Climatic Certificate. Additionally, every two to three years, the school's Enviro-Team organizes a seashore expedition, establishing new partnerships with local schools and NGOs.



👉 www.zs1senica.edupage.org/a/we-are-at-the-same-boat

Contact us to get more information about our work :
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4

PURE MARE

«Behoría Garbia»

KAYAKING, STAND UP PADDLEBOARD (SUP) 

TARGET AUDIENCE  primary and secondary schools

Led by *Begi Bistan in collaboration with Federación Vasca de Piragüismo and local entities in the town of Orío*

Sustainable Education Initiatives through Gamified Challenges and Cleanups

Raising awareness has always been at the core of our mission, rooted in the background of our team members with degrees in various earth sciences disciplines like geology, biology, environmental sciences, marine sciences, and more. We always strive to make incremental contributions, emphasizing the principle of «leave no trace.» This journey began back in 2015 when the idea was conceived to integrate our gamification concepts into standard educational visits for a graduating student's final-year project. Building upon this foundation, the following year witnessed a transition from standardized visits to a more engaging format with tests, scores, and prizes. In 2018, we ventured into school initiatives, seeking innovative approaches to extracurricular activities and simplifying teachers' tasks. Simultaneously, we aimed to instill awareness-raising topics and foster alternative ways of engaging with future generations, our «clients.»



By 2019, we had a workable draft and a motivated team eager to test it. However, the pandemic led us to postpone it until 2021-2022, aligning with the school year. In September 2021, preparations resumed, and testing commenced in the spring of 2022.

The primary target audience of this competition-driven project comprises primary and secondary school students. The central aim of the competition was to help students gain a comprehensive understanding of the three Rs: reduce, recycle, and reuse.



To assemble a group of participants, we contacted schools and teachers via emails including both schools that had previously collaborated with us and others unfamiliar with our work. Over three months, 277 participants undertook a series of activities to foster loyalty and build camaraderie while adhering to specific challenge deadlines. These activities included:

Berrikasi! (The Repurpose Challenge):

Students crafted daily-use school materials from recycled items, such as pencil cases and folders, encouraging a sustainable approach to everyday items.

Berrabiliz birziklatu! (The Recycling Challenge):

This challenge tasked students with crafting waste containers for recycling using reused and recycled materials. These containers were strategically placed in accessible locations like schools, parks, and nursing homes. Additionally, students produced explanatory videos showcasing their school's unique strategies for reducing, reusing, and recycling.

4



Artelandu! (The Art Challenge):

The most artistic of the challenges, students were tasked with creating art pieces using recycled materials. The artwork was accompanied by explanations of its significance, purpose, and the materials employed.

Throughout this process, each challenge was gamified, with each activity assigned a score. The school that accrued the most points across the 3Rs was crowned the victor and awarded a Flysch route boat trip to witness the captivating cliffs and Flysch geological formations in Zumaia, a location known for its geological significance and as a Game of Thrones filming location. While

all participants enjoyed a kayaking cleanup expedition along the Oria River, the highest-scoring school claimed an additional prize.

In these cleanups, we prioritized environmental responsibility by employing jute bags instead of plastic ones for waste collection. Our collaborative efforts spanned the cleaning of water bodies and accessible shorelines reachable via kayaks and stand-up paddleboards (SUPs). Following the cleanup, the collected waste underwent meticulous sorting, with an emphasis on maximizing recycling opportunities. Notably, a creative twist was added to the initiative, as some of the retrieved trash was



transformed into classroom art projects. Our collective efforts have yielded substantial results, with 398 kg of waste collected during these initiatives.

The project's frequency varies based on school participation and schedules, with a typical two-year cycle. However, our endeavors extend beyond schools. In 2023, we organized a public cleanup event on October 21, welcoming participants from the general public. Furthermore, we aim to introduce MICE (Meetings, Incentives, Conferences, and Exhibitions) company incentives centered around the same theme.

What drives us forward is our commitment to differentiation, unwavering belief in our mission, and the determination to make a meaningful contribution. Leveraging the expertise and experience of our team, we have successfully navigated this path. Moreover, this initiative has allowed us to depersonalize our operations, providing year-round work opportunities, retaining talent, and shifting our employment structure from one characterized by discontinuity to nearly all permanent positions.

www.begi-bistan.com

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begi • bistan

5

POSIDONIA LAB

SCUBA DIVING, SNORKELING 

Led by *Asociación Vellmarí*

TARGET AUDIENCE  children 8-17 years old

Marine biodiversity education through snorkeling, diving, workshops, and projects

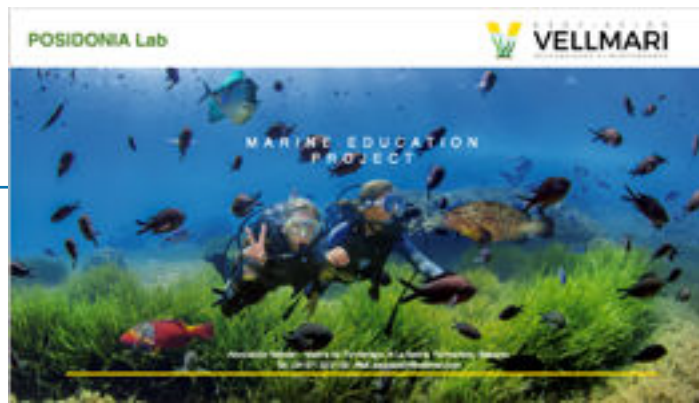
Our marine education initiative is tailored to young individuals aged 8 to 17, with a clear mission: the preservation of marine habitats, species, and ecosystems. We achieve this through a fusion of aquatic activities and marine workshops, delivered across schools, online platforms, and on-campus settings.

During the winter months, we maintain close contact with our young participants through online workshops, offering two distinct options:

- **Monthly sessions**, typically held on Saturday mornings or holidays, facilitate engagement through newsletters and Instagram updates.
- **Scheduled** session that allows us to collaborate with schools to conduct workshops aligned with their curricular content, adding a structured educational dimension to the program.

Our monthly workshops commence in September and conclude in June, aiming to coordinate at least three annual workshops with schools to enrich curriculum topics.

In addition to these workshops, we organize summer camps designed to equip participants with essential diving and snorkeling skills. These activities empower them to actively engage in marine research, supporting scientific investigations. Our dive camps span three months, perfectly aligning with the summer season. Before venturing into the water, we arrange mini-workshops, ensuring that participants are well-prepared. Groups are organized based on their water experience, age, and proficiency level. We firmly believe that the practice of scuba diving and snorkeling is integral to marine conservation. Comprehensive understanding and proficient execution of these activities are essential prerequisites for learning about and respecting the marine environment. In the afternoons, we conduct additional workshops with in-



depth content, supplemented by activities like data downloading and photo analysis for further work throughout the week.

The primary and fundamental tools for enjoying our camp are a snorkel and a diving license. We meticulously structure the diving courses, and interleaving marine conservation workshops that encompass fish identification, biodiversity, sustainable fishing practices, marine zones, coral ecosystems, underwater photography, marine mammal studies, and more. Our weekly schedule offers diverse activities in the mornings and afternoons. The culmination of each camp involves a final dive and snorkeling session, during which participants present their Eco-projects. These projects are evaluated by both our staff and fellow participants. The learning experience extends to creative tasks such as drawings and arts & crafts endeavors.

Additionally, Vellmari leads two marine science projects: «Restoration of Posidonia» and «Study of Coral Reefs in Our Islands.» Both projects incorporate workshops that are deeply integrated with our conservation endeavors. In the Posidonia project, young individuals collect vital data concerning the condition of seagrass meadows, actively participating in seed sowing and collection efforts. Data collection predominantly relies on photographic observations.

Moreover, we actively collaborate with various citizen science projects, including:

- **Observadores del Mar:** Participants upload photos of fish or algae species collected during their marine activities.
- **iNaturalist:** We maintain a project where participants share photos of captivating underwater discoveries.
- **National Geographic Debris Tracker:** We contribute photos of the trash we encounter during our activities.
- **Ecomar:** Our data on marine debris is uploaded into their data application.

Our mission extends beyond students, reaching their families, educational institutions, and research centers. This holistic approach ensures that we foster the right knowledge and generate a positive impact across various segments of society. We keep families informed about our activities through social media campaigns, newsletters, and events like MasterClasses, which feature expert scientists providing insights into species conservation and scientific studies. Families are consistently encouraged to participate in these enriching experiences. Through these channels, we aspire to inspire a profound and lasting commitment to marine conservation.

PADI/DAN OCEAN LITERACY

SCUBA DIVING, SNORKELING 

TARGET AUDIENCE  schools

Led by *Professional Association of Diving Instructors (PADI), Divers Alert Network (DAN)*

Combining online learning with snorkeling experience for ocean literacy

Ocean Literacy is an environmental education initiative geared towards schools, and created by the Professional Association of Diving Instructors (PADI) in partnership with Divers Alert Network (DAN). Originating in Italy in 2018, this project, endorsed by the Italian Ministry of Education, aimed to raise awareness in schools across Italy. In recent years the initiative has evolved into an international open-source learning platform.

The primary objective of Ocean Literacy is to sensitize the young generations to a new type of relationship with the sea, fostering values related to biodiversity conservation and marine issues, particularly concerning the Ocean and the Mediterranean Sea. This is achieved by introducing ocean-connected sports like diving, freediving, or snorkeling, allowing children to directly engage with the wonders of underwater life. Through this experience, the participants have an opportunity to witness environmental degradation, and thus become passionate advocates for preserving and safeguarding biodiversity.

13 CLIMATE ACTION



14 LIFE BELOW WATER





The Knowledge Development aspect of the course relies on independent learning using the Ocean Literacy manual, accessible through an e-learning platform. It equips students with the knowledge to:

- **Gain insights** into the Ocean and the Mediterranean Sea.
- **Understand** the concept of Citizen Science.
- **Learn** how to interact with the marine world and communicate underwater.

Each student selects one of four educational routes, prepared by professionals:

Route 1: EDUCATION – CLIMATE CHANGE - Developed by Dr. Ernesto Azzurro, a researcher at the National Institute for Environmental Protection and Research (ISPRA).

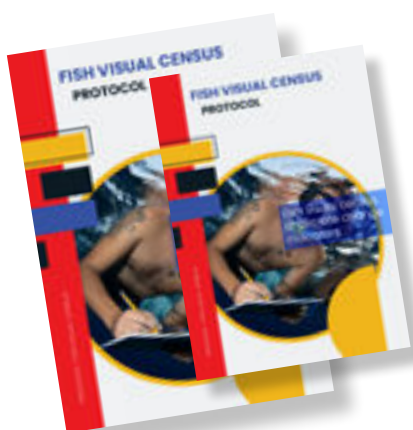
Route 2: EXPLORATION - UNDERWATER ARCHAEOLOGY - Developed by Fabio Portella, an Underwater Archaeology Trainer and Explorer.

Route 3: COMMUNITY – CITIZEN SCIENCE - Developed by Dr. Franco Andaloro, Research Director at Fondazione Anton Dohrn.

Route 4: CONSERVATION - PLASTICS IN OUR SEA - Developed by Dr. Stefano Goffredo, from the Department of Biological, Geological, and Environmental Sciences at the University of Bologna.

During the course, after the dry workshop held by a PADI professional, students in groups complete the snorkeling excursion by collecting data under the direct supervision of an instructor.

Upon the successful completion of one of these routes, participants are awarded the PADI/DAN Ocean Literacy Certificate. This program empowers future generations with knowledge and passion, fostering a deeper connection to the marine environment and the importance of its conservation.



www.oceanliteracy.edu.daneurope.org/

Contact us to get more information about our work :
oceanliteracy@daneurope.org

7

SCHOOL SPORTS

«Desporto Escolar»

SURFING AND PADDLEBOARDING 

TARGET AUDIENCE  customers certain ages, mostly kids

Led by *Centro de Formação Profissional de Canoagem e Surf AEFFL*

Locally nurturing ocean stewardship through kayaking and paddleboarding

The **Centro de Formação Desportiva de Canoagem e Surf AEFFL** is located in the charming fishing village of **Fuseta**, nestled in the **Algarve region**. This region has witnessed a surge in tourism, making Fuseta a sought-after destination for vacationers. However, Fuseta boasts a unique feature - its proximity to **Ria Formosa**, a protected natural park that is home to essential flora and fauna crucial for the marine ecosystem.

While the primary objective of our Center is to teach canoeing and surfing to young generations, our town's geographical location profoundly influences our approach. We recognize the interconnectedness of our town with ocean sustainability. This recognition drives our project to extend its scope beyond sports, with the aim of fostering community awareness about the complexity, beauty, and fragility of our natural park.





We actively participate in campaigns to clean up Ria Formosa. During each sea excursion, our dedicated group of 50 regular volunteers conducts symbolic cleanups. For them, one trip to the sea equals one piece of plastic waste brought to the shore. They perform such cleanups roughly once a week. Most of these volunteers are students from our local cluster school and nearby areas. We equip them with kayaks and stand-up paddleboards (SUPs) during these cleanups. They are responsible for retrieving the waste they find in the water, bringing it ashore, and disposing of it properly in recycling bins.



Additionally, we organize larger cleanup initiatives. We collaborate with other ecological projects, such as Escola Azul, for more specific cleaning actions that typically span one day. We arrange cleanup events that are open to the general public. These larger-scale actions are occasionally supported by the city council or the parish, which provides equipment beyond water gear, including trash bags and trucks.

In addition to these field activities, we actively foster collaborative initiatives and connect students with the water environment. Our goal is to educate local students and inspire them to protect the marine environment. To achieve this, we organize talks and lectures featuring renowned speakers. Notable athletes like Joana Schenker, a professional bodyboarder and the 2017



APB Bodyboard World Champion, have shared impactful messages about sports, perseverance, and ecology. We have also had the privilege of hosting environmental advocate Andreas Noe, known as «The Trash Traveler,» and assisting him in his mission to clean beaches and raise awareness about environmental conservation.

ERASMUS MARIS

SAILING, LING



TARGET AUDIENCE



schools

Led by Ayam Sailing Europe, European Commission's Joint Research Centre - European Citizen Science Association, Technical University Thomas More, Generalitat Valenciana, Secretariat General of the European Schools, University of Ghent.

An alliance between scientific research, formal and non-formal education

Erasmus Maris objective is to create a strategic alliance in Europe between formal education, non-formal education, and scientific research sectors. The main goal is to engage upper secondary schools in co-creating new knowledge related to preserving the marine environment and inland waters while ensuring inclusivity and equitable participation. The initiative is funded by the Erasmus+ program.

Erasmus Maris offers a holistic approach and a collaborative platform to:



Integrate citizen science in secondary schools incorporating the key competencies for Lifelong Learning.

Facilitate the exchange of ideas and knowledge and share resources between schools from vocational and general education systems to improve environmental education and knowledge.

Increase science teachers' competencies in scientific procedures and keep them up to date with the latest developments in the science of measurements to facilitate collaboration with scientific research institutions and ensure that the next generation of scientists and researchers have a strong foundation in essential components of the modern scientific process.



Central to the implementation of Erasmus Maris is the sailboat. During a week-long event in a nautical school (Erasmus Maris week), students and teachers acquire both scientific and transversal competencies (such as teamwork and leadership). These competencies are achieved through a combination of workshops with scientists and sailing activities. Additionally, the sailboat's components (such as its engine, navigation systems, electronics, and electrical circuits) create a real-world STEM learning environment for schools of vocational and general education.

Although the focus is on microplastic pollution, the initiative's concept is applicable to any environmental research theme that can be adapted to a school setting. The idea is to use education to create awareness and drive action towards environmental conservation and sustainability while involving students and teachers in the research process.



www.erasmusmaris.eu

Contact us to get more information about our work :
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ENVIRONMENTAL CLEANUPS

36 **GUARDIANS OF THE BLUE**

Connecting volunteers, fishermen, and scuba divers to protect the Byblos Harbor.

38 **UNDERWATER CLEANING**

Streamlining the underwater cleanups through the collaboration of free and scuba divers.

40 **LET'S GO**

Paddling for wellness and ocean protection.


42 **PLUMBUM PROJECT**

Underwater lead cleanup:
circular economy initiative

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Scuba divers tackling ghost gear pollution





Environmental cleanups represent one of the simplest and most direct methods for engaging the general public in addressing environmental issues. While it is true that some critics view cleanups as addressing the symptoms rather than the root causes of our unsustainable consumption and packaging practices, they remain an accessible and effective means of involving various stakeholder groups. Cleanups require no strict age limits or prerequisites for participation and are relatively cost-effective to organize. They serve as a powerful tool to connect with the public and illustrate the scale of the environmental problem.

Cleanups not only raise awareness about the issue of environmental litter but also emphasize the cumulative impact of human activities on the environment. While a single piece of litter may seem insignificant, the collective effect of billions of people contributing to the problem can be devastating.

Cleanups offer a way to engage people in practical activities that provide a sense of fulfillment and temporarily alleviate environmental pressure. Additionally, when combined with new policies and increased awareness aimed at preventing large amounts of waste from entering the natural environment, cleanup efforts become a crucial component of overall environmental improvement.

Organizing cleanups in marine environments presents unique challenges compared to land-based cleanups. However, as demonstrated in our Handbook, these challenges often lead to innovative solutions and collaborations that can further enhance community involvement in ocean protection.

9

GUARDIANS OF THE BLUE

SCUBA DIVING 

TARGET AUDIENCE 

certified scuba divers

Led by *Guardians of the Blue*

Connecting volunteers, fishermen, and scuba divers to protect the Byblos Harbor.

The goal of our activity is to enhance the understanding of local divers about marine pollution and methods to counter it, with the purpose of safeguarding local marine life. Our major activity is cleanup dives in Byblos' harbor, which hosts many juvenile species that rely on it as their nursery. Each cleanup is a collaboration between the divers, fishermen, and non-diving volunteers. Volunteer divers from Xiphias Diving Club and across Lebanon can take part in each cleanup, with so far 20 divers having participated in total. Announcements are made on social media and through our networks, and any certified diver can join. Divers are paired to work together underwater to collect the marine debris and are given bags and gloves for safe handling of the waste. A safety briefing as well as training on environmentally respectful behaviors to adopt during underwater cleanups are conducted with divers before each cleanup.





The fishermen and non-diving volunteers collect the retrieved waste from the land, which is then weighed and assessed. The waste is then transported to the recycling facilities of Ziad Abi Chaker, a Lebanese pioneer in recycling. So far, we removed around 3,600kg of waste from the harbor.

Apart from these initiatives, we've crafted infographics and a poster highlighting marine species found in the area. This marine species poster was made by Laura Khatib, the co-founder of Guardians of the Blue, by using all the pictures taken by the diving club over the years. This process allowed us to identify all recorded species and create the database we used for the poster. These visuals are exhibited at Xiphias Diving Club, fostering diver education about local marine life and marine science. The scuba diving training at the club is intertwined with nurturing environmental consciousness. Recent pictures taken by the club allowed us to record for the first time an invasive species from the Red Sea in the Mediterranean. This first record will be published in a scientific journal, thanks to our collaboration with local marine biologist Dr. Ali Badreddine.

Additionally, we provide divers with training on lionfish hunting techniques and insights into the repercussions of invasive species in Lebanon. Divers can take a special course on lionfish hunting, which then allows them to hunt and safely handle the fish in Lebanese waters. The training is given on land for information on lionfish and its impact on local marine life, as well as safety measures, and underwater for the hunting techniques using a Hawaiian sling and a container. The necessary hunting gear is provided for the training and can then be bought at the club.



👉 www.weareguardiansoftheblue.org/underwater-cleanups


Contact us to get more information about our work :
contact@weareguardiansoftheblue.org

10

UNDERWATER CLEANING

«Limpiezas subacuáticas»

SCUBA DIVING AND FREE DIVING (APNEA) 

TARGET AUDIENCE  certified scuba and free divers

Led by *Club de Buceo Hupalupa*

Streamlining the underwater cleanups through the collaboration of free and scuba divers.

Our activities initiated in January 2023, strive to connect scuba diving and free diving with environmental stewardship by conducting underwater cleanups. Our dedicated team, comprising 20 passionate volunteers, aspires to organize a total of 20 underwater cleanups annually, spanning diverse locations around La Gomera Island. Throughout the year, we typically carry out multiple cleanups each month. Our outreach efforts predominantly rely on platforms like Instagram and Facebook, complemented by word-of-mouth promotion. The frequency of our cleanups varies depending on the availability of our club members, ranging from three cleanups in some months to just one in others.





Our operations are coordinated to optimize efficiency. Typically, our scuba divers descend below the water's surface, while our freedivers retrieve bags filled with debris, streamlining the cleanup process and reducing the need for divers to repeatedly ascend and descend. In certain instances, a single diver can fill as many as 6 to 8 bags with litter.

We have established a collaboration with the environmental department of Cabildo, which assumes responsibility for waste collection, classification, and recycling. To facilitate our volunteer efforts, Buceo La Gomera, my company, generously provides all the necessary diving and cleaning equipment.

We conscientiously track the volume of waste removed during our cleanups, although for minor cleanup efforts, weighing may be omitted. Over time, our endeavors have led to the retrieval of a wide array of items, ranging from sunken boats to cell phones, cans, boat components, fishing equipment, cookware, bottles, and more. Some cleanup sites are revisited periodically, particularly harbors, while others result from pre-dive reconnaissance missions that unveil substantial quantities of litter.



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11

LET'S GO

«GoazenUp»

STAND UP PADDLEBOARD (SUP)     

TARGET AUDIENCE  anyone interested in SUP practice

Led by *GoazenUp*

Paddling for wellness and ocean protection.



We are a sports association dedicated to promoting physical and emotional well-being while caring for our environment.

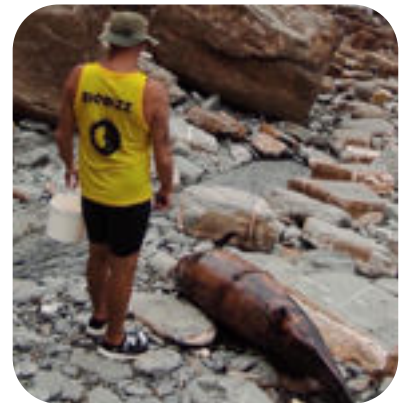
The project was initiated a decade ago by Aketza Sánchez, also known as the Waterman, a survivor, who overcame a spinal cord injury from a surfing accident. Since 2012, Aketza has shared his passion for paddle surfing and the sea, using them as tools to enhance physical and emotional health and to raise awareness about the ocean's importance while contributing to its protection.

Utilizing stand-up paddleboards (SUPs) as both practical tools and modes of transportation, we explore various locations through water routes. Over the years, the GoazenUp project has evolved into a vibrant community of over 200 volunteers

from Spain, France, Portugal, Norway, and Morocco. We clean and care for the environment in all the areas we visit!

Our community organizes environmental cleanups both in our local areas and during our members' travels. The activities are voluntary, led by our members for our members, or arranged for groups reaching out to us for therapeutic and awareness purposes. Over the past decade, the GoazenUp initiative has organized cleanups in diverse places, around cliffs, beaches, and estuaries, often using SUPs to reach areas inaccessible from the shore. Depending on the activity and the garbage, part of it is discarded, and part is recycled. We collect up to 8500 kg of trash per year.

In addition to cleanups, our volunteers conduct awareness talks in schools, universities, and businesses. In these sessions, we not only showcase our activities but also shed light on the challenges our marine environment faces, emphasizing issues such as trash and other forms of pollution. We discuss marine life encountered during our SUP cleaning outings, fostering an understanding of the aquatic ecosystem.



👉 www.instagram.com/goazenup/?hl=fr

Contact us to get more information about our work :
goazenup@gmail.com

12

PLUMBUM PROJECT

«Proyecto PLUMBUM»

SCUBA DIVING



TARGET AUDIENCE



certified scuba divers

Led by *Asociación Hippocampus*

Underwater lead cleanup: circular economy initiative

The main objective of our initiative is to decontaminate the seabed from lead, reduce the negative impact it produces, and promote recovery and remanufacturing, fostering an effective circular economy.

Our methodology involves scuba diving and snorkeling, utilizing compact metal detectors designed for underwater use. The cleanup dives are conducted by volunteers primarily from the Hippocampus Association. Many of the participants are experienced divers, though recent certifications are welcome to join and gain valuable experience. Certification, insurance, or a license is mandatory for all participants.

Each dive begins with a briefing, providing an overview of the dive, the operational aspects of metal detectors, and the equipment used for lead retrieval, including



abandoned fishing gear. The dives target coastal areas, shallows, or islands—regions frequented by fishing activities, a major contributor to lead contamination.

Once lead is brought to the shore it is cleaned, removing all the remains of plastic, other metals, and other possible

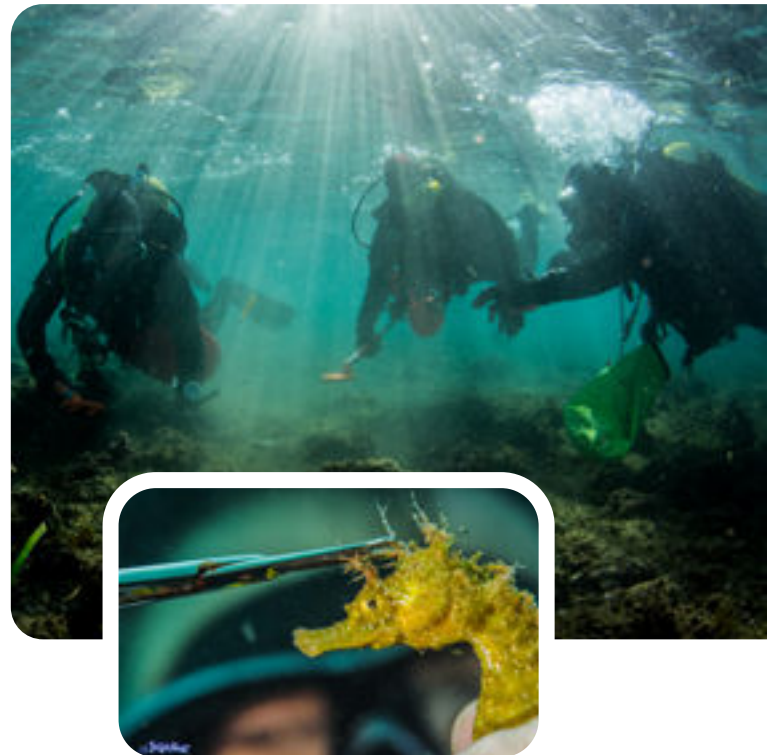
residues. Subsequently, the amount of extracted lead pieces is counted and the total weight collected per person per day is recorded, contributing to the project's geo-referenced database.

Collaboration with companies has played a vital role, with three large companies responsibly processing the collected material. A notable partnership involves a company manufacturing lead weights for scuba diving belts, incorporating material recovered from the sea. This circular approach encourages diving centers to exchange dirty lead for clean lead weights, aligning with the project's commitment to circularity.

To date, the project has extracted 1400 kilograms of lead, equivalent to recovering 18,000 lead pieces from the seabed. A network of 150 containers across the Iberian Peninsula facilitates the deposition of lead waste, primarily from fishing. This remarkable achievement is attributed to the dedicated efforts of volunteers from the Hippocampus Association, scout groups, ADAPT Association, and various collaborators, including institutions like the Oceanographic of Valencia and the aquarium of Almeria.

Beyond dive operations, our volunteers actively engage in outreach activities at conferences, exhibitions, and festivals,

highlighting the impact of marine litter, particularly lead. This outreach fosters growth in our volunteer group. Expansion plans include extending the network into regions like the Canary Islands, Balearic Islands, Basque Country, Valencia, and Madrid, ensuring the sustained impact of our initiative.



www.proyectoplumbum.com

Contact us to get more information about our work :
info@asociacionhippocampus.com

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GHOST DIVING POLAND

«Proyecto PLUMBUM»

SCUBA DIVING



TARGET AUDIENCE



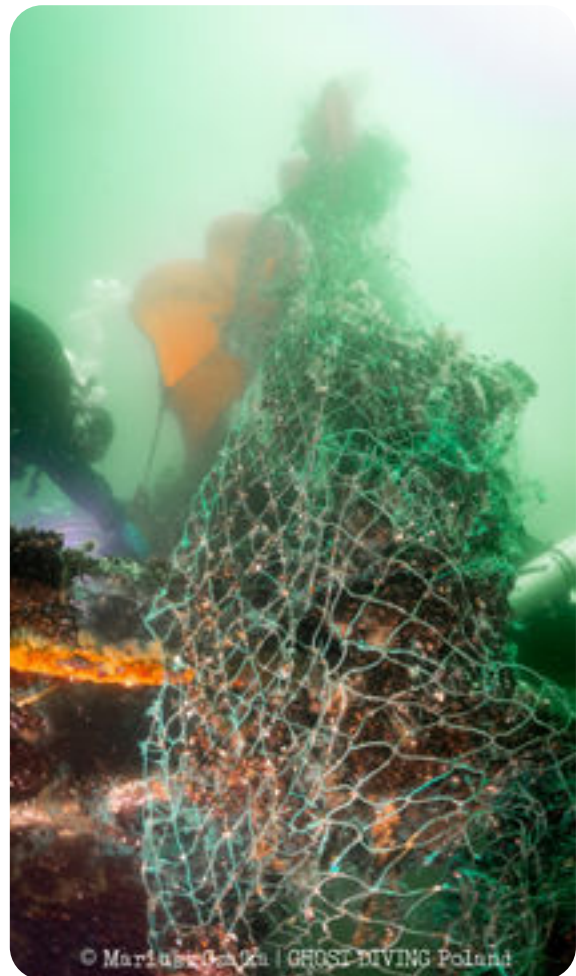
technical divers

Led by *Ghost Diving Poland*

Scuba divers tackling ghost gear pollution

Ghost fishing, defined as abandoned fishing gear catching and killing marine life, poses a severe threat to our oceans. The term 'ghost gear' refers to discarded nets, lines, and traps, constituting one of the most harmful forms of marine debris. Annually, an estimated 640,000 tons of fishing gear are lost or abandoned, with the potential to continue fishing for multiple decades or even centuries.

Ghost Diving Poland is a local chapter of the international initiative - Ghost Diving. Our mission is clear: locate and extract ghost gear from seas, lakes, and oceans. We are a team of 28 volunteer technical divers, who are committed to removing lost fishing gear and raising awareness about this global issue. We conduct approximately 20 dives each year, primarily in the Baltic region, with additional dives in cooperation with Ghost Diving chapters in other countries, like Croatia, Spain, Malta.



© Mariusz P. / GHOST DIVING Poland

Our divers undergo specialized training, adhering to strict standards and procedures to minimize risks. Each dive is meticulously planned, always preceded by recon dives for thorough analysis. Each diver is assigned a specific role during the operation. Most dives are conducted from chartered boats or in collaboration with boat operators.



Since 2019, we have successfully cleaned wrecks and seabed from lost fishing nets, gear, and marine debris. Recovered ghost gear, when possible, undergoes the regeneration process through our partners. Healthy Seas Foundation helps us to transform ghost nets into new sustainable materials that serve to manufacture various products such as swimwear, shorts, socks, bracelets, and more.



Our commitment extends beyond direct action; we advocate for awareness and education on the issue of lost fishing gear. Many of our volunteers are underwater photographers and filmmakers, documenting our activities for evaluation and presentation purposes. We give educational presentations and workshops at diving clubs, events, exhibitions, and shows. In 2021, we collaborated with the Gdynia Aquarium to create a Ghost Diving exhibition to educate all visitors about the problem of ghost fishing.



www.ghostdiving.pl/

Contact us to get more information about our work :
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CITIZEN SCIENCE, ENVIRON DATA COLLECTION, AND MO

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Massive scientific data collection for World Ocean Day
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Paddletrawl: citizen science on plastic pollution
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Seahorse conservation in Mar Menor Lagoon



ENVIRONMENTAL MONITORING

Collecting environmental data, whether for monitoring the state of the environment or for scientific research, demands consistency, regularity, and the use of appropriate methodologies. Often, to obtain representative data for a specific area, it is crucial to cover vast areas within a limited timeframe. This requires the involvement of a large number of people. However, research and monitoring projects may not always have the resources to hire and coordinate many individuals, especially when data collection does not necessitate full-time engagement but rather the participation of many individuals dedicating relatively small amounts of time regularly.

The concept of citizen science dates back to 1989, and although various approaches and definitions exist, it generally refers to the collection and analysis of data by members of the general public, often as part of collaborative projects with professional scientists. Citizen science finds applications across a wide range of study areas, with a notable focus on biology and conservation in published research. Importantly, participation in citizen science projects not only enhances the scientific community's capacity but also educates the public about the scientific process and raises awareness about various topics. Therefore, citizen science projects are vital for advancing scientific knowledge, particularly in the natural sciences, and for fostering environmentally literate societies.

In this section, we have compiled projects that engage water sports practitioners in scientific research and the monitoring of marine environments.

DIVING FOR A KNOWN OCEAN

«Buceando por un océano conocido»

SCUBA DIVING



TARGET AUDIENCE



certified scuba divers

Led by *Buceo Conciencia*

Massive scientific data collection for World Ocean Day

The project arises as a citizen science initiative in the field of diving and marine conservation. With the growing interest in the protection of marine ecosystems and the need to collect scientific data, the aim is to involve the diving community in the collection of information on marine life and underwater ecosystems. To achieve that we held a historic event aimed at setting a world record for the highest number of divers contributing to marine research on a single day. The call was aligned with World Ocean Day (WOD), encouraging divers to dedicate their diving on June 10 2023 (the first Saturday after the WOD) to contribute to the investigation of vulnerable fish off the Spanish coast.



GOALS:

Promote the active participation of the recreational diving industry and divers in marine research and conservation.

Collect scientific data on marine biodiversity, ecosystem health, and other aspects relevant to the sustainable management of marine resources.

Promote awareness and knowledge about the importance of marine conservation among divers and society in general.

METHODOLOGY:

Call and registration - An open call was made to all divers interested in participating in the project. They were invited to register and receive training on data collection protocols.

The project gathered nearly 50 diving centers around Spain (including the Canary and Balearic Islands, Ceuta, and Melilla) as official partners allowing the divers to register for the dive with the one closest to them as well as arrange gear and air rentals.

On June 8 hosted do a live online with the directors of each line of research to which the dives and data collection aimed to contribute. In this event, the divers learned everything related to diving on June 10 and all their questions were answered.

Diving and data collection - Participating divers dove at from more than 50 dive sites along the entire Spanish coast. During the dives, they followed the established protocols to document the state of vulnerable fish populations in the Mediterranean-Atlantic to later upload it to a marine citizen science platform: Observadores del Mar.

Data validation - The data uploaded to the platform will be validated by Observadores del Mar researchers.

Dissemination of the project - A communication campaign was carried out both on social networks and other media to broadcast each phase of the project.

Replication and transfer - The project results and methodology will be shared with other countries and regions interested in implementing similar initiatives. Support and training are provided to facilitate the replicability and transferability of the experience acquired.

In summary, the project focuses on organizing a large event with a massive call of divers participating in the scientific data collection concentrated in a single day. In 2023 662 certified scuba divers registered to participate in this initiative. By positioning the event as a historical fact, it generated greater media interest and enable us to make more visible the importance of involving the diving community in the generation of relevant information for the sustainable management of marine resources and finally improve scientific knowledge of the seabed of the Mediterranean, both scientifically and socially.



SURFING FOR SCIENCE

PADDLE BOARDING, KAYAKING, ROWING 

TARGET AUDIENCE  general public

Led by *Surfrider Spain, University of Barcelona,*

Paddletrawl: citizen science on plastic pollution

Vast amounts of microplastics have been discovered floating on the surface of subtropical oceanic gyres. However, our understanding of how plastic is distributed in the ocean remains incomplete, particularly in coastal areas. The motivation behind the «Surfing for Science» project stems from the conventional use of trawls towed by research vessels for collecting scientific samples. In this collaborative initiative, we've developed a floating net trawl designed to collect samples near the shore, using stand-up paddleboards

(SUPs), kayaks, and rowing boats – hence the term «paddle trawl.» Participants drag this trawl for approximately one nautical mile. These samples are then sent to the university laboratory for in-depth analysis. This method not only helps estimate the abundance of microplastics per square meter in surface coastal waters but also enables us to determine their origin and transport mechanisms.

Coordinated by the Spanish delegation of Surfrider Europe and the University of Barcelona, numerous associations have been actively collecting scientific samples since 2019. Samples are gathered on a weekly basis, and the public is encouraged to participate in this collection process through affiliated organizations along the Catalan coast and the Balearic Islands in the Mediterranean sea, and the Cantabrian coast in the Atlantic ocean.





Another pivotal component of this project is an interactive web application that allows users to access and explore the data collected in a shared database. This application provides a summary of the findings from the Surfing for Science project, including data on particle counts, concentrations, particle sizes, shapes, and the chemical composition of plastics. Additionally, the general public can view real-time maps on Wikiloc that display where the ongoing sample collections are taking place.

Thanks to its rigorous approach to data collection and analysis, this initiative stands out as an exemplary citizen science project. Results obtained from samples collected by citizens have been published in peer-reviewed scientific journals, underscoring their contribution to our understanding of plastic pollution in the oceans.



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HIPPOCAMPUS PROJECT

«Proyecto Hippocampus»

SCUBA DIVING



TARGET AUDIENCE



certified scuba divers

Led by *Asociación Hippocampus*

Seahorse conservation in Mar Menor Lagoon

The Hippocampus Project, initiated in 2006 due to concerns about the declining seahorse population in Mar Menor Lagoon, evolved into the Hippocampus Association in 2007. Since its inception, our association has been actively conducting seahorse population censuses, collaborating with institutions like the Spanish Institute of Oceanography (IEO) in Murcia and the Fisheries and Aquaculture Service of the Ministry of Environment of the Region of Murcia.

Utilizing the Underwater Visual Census (UVC) method for population density estimation, trained volunteers follow a specific protocol, including initial training on the use of underwater materials and scientific diving. The volunteers also undergo theoretical training online, equipping them with essential knowledge about the methodology and tools used during underwater surveys.



Data collected by our divers is organized by sampling stations and then transferred to ArcGIS to generate density maps for three defined areas within the lagoon (coastal strip, central zone, rocky stratum). These maps allow for the assessment of population density and overall population size annually. Generic data from each dive, summarizing outing details, sightings, participating volunteers, and other relevant

information, are recorded in a spreadsheet. The collected data actively contributes to the GBIF (Global Biodiversity Information Facility) database, aligning with the Hippocampus Association's commitment to global biodiversity conservation.

The project's notable outcome includes a recent article published in the Journal of Fish Biology. This publication evaluates and monitors the long-snouted seahorse (*Hippocampus guttulatus*) population in Mar Menor Lagoon, highlighting its decline in the last decades and the impact of the eutrophication crises in 2016 and 2019 on the species.

Moreover, we aspire to include the seahorse species in the National Catalogue of Threatened Species, aiming to enhance its protection and initiate a timely recovery plan. This comprehensive approach underscores the Hippocampus Association's dedication to the conservation and preservation of marine biodiversity.



👉 www.asociacionhippocampus.com

Contact us to get more information about our work :
info@asociacionhippocampus.com

SUSTAINABLE PRACTICES IN WATER SPORT TOURISM

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Two-day marine education program integrates classroom and hands-on exploration

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Ocean literacy manual merges diving education and environmental awareness

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Pioneering course for sustainable nautical tourism practices

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Immersive, educational marine experiences with Oceanário de Lisboa

64 **POSIDONIA ESCAPE EXPERIENCE**

Marine education through innovative underwater escape rooms

ICES URISM

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awareness

4

Water sports, in general, are closely connected with sports tourism, bringing both positive and negative impacts to the economy, environment, and local communities. While some practitioners may, perhaps inadvertently, contribute to environmental degradation, these activities can also awaken individuals to the beauty of nature, instilling a desire to protect and conserve it.

Given that many water sports practitioners evolve into business owners within the industry, they play a role in popularizing these activities, potentially adding to environmental pressures. Therefore, fostering a sustainable approach to water sports-related tourism is crucial. Encouraging local business owners to implement sustainable practices, and engage with their clients through education and awareness raising, is essential. Providing them with the necessary tools to develop and promote these practices is also paramount.

In this section, we present initiatives targeting tourists at various levels of experience. These range from initiatives designed for individuals with no prior water sports experience, focusing on educating them and promoting positive and sustainable interactions with marine ecosystems, to projects creating tools for experienced practitioners to raise their awareness and enhance their practices.

SCIENTIST OF THE SEA

SAILING



TARGET AUDIENCE



tourists

Led by *EcoMarine Malta Ltd*

Two-day marine education program integrates classroom and hands-on exploration

This educational program spans two days, offering a comprehensive experience that combines classroom learning with hands-on outdoor exploration by the seashore or aboard a boat.

During the initial day, students engage in classroom sessions that integrate various educational resources. These resources include videos, audio materials, and hands-on experiments, all designed to teach different methods employed in scientific data collection. Throughout this day, students delve into the fascinating realms of marine ecosystems, oceanography, and marine biodiversity. To cater to the diverse age groups of the participants, the classroom activities include manual exercises, dedicated board games, drawing sessions, and collaborative group work. These activities serve as essential groundwork for the practical session scheduled for the following day.



The second day offers an exciting field experience, with options for exploration either along the seashore or aboard a research boat.

For the beach session, the day begins with a meeting with a scientist. Here, students embark on a journey to recognize marine organisms, animals, plants, and their various adaptations through engaging and hands-on experiments. Activities like «the great



search» involve students working together in groups to explore the beach, identifying elements for later information processing. They learn to differentiate between mollusks and crustaceans and understand factors influencing sea color and beach formation. Found materials, both natural and man-made, can be creatively used by the students to craft 2D or 3D art pieces. Additionally, a seawater analysis is conducted to measure parameters such as pH and the presence of nitrite, facilitating discussions on ocean acidification and eutrophication.

The boat day offers a captivating marine research experience aboard a safe and comfortable vessel. Here, students actively take on the roles of marine researchers. The day begins with planning and plotting routes for the boat trip. Participants apply what they've learned during the previous

days, drawing routes on maps and entering data into navigational systems. Before departure, observational shifts and data collection are organized to ensure that every student is actively engaged in the various research activities. When marine animals such as dolphins, turtles, seabirds, or migrating birds are spotted during the excursion, participants actively record their observations, including start and end times, and capture photos and videos of these magnificent creatures. Furthermore, water sampling is conducted to analyze various parameters, including plankton and microplastics collection. Simple microscopes are used when available, enhancing the overall educational experience.



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FINS INTO THE WATER:

Ocean Literacy Into Practice

SCUBA DIVING 

TARGET AUDIENCE  certified scuba divers

Led by *Tavolara Diving, Professional Scuba Schools*

Ocean literacy manual merges diving education and environmental awareness

Fins Into The Water: Ocean Literacy Into Practice is an educational outreach initiative that was developed starting in 2022. Its primary achievement is the creation of a teaching manual, which emerged from a field-based mission carried out in collaboration with a prominent representative of the Italian SCUBA diving community within the Tavolara Marine Protected Area (MPA).

The concept behind this manual is rooted in an innovative storytelling approach. It combines diving education with marine research and environmental awareness. The project pooled expertise from multiple disciplines, including geological and ecological aspects. To make the content engaging and accessible, a charming character named «Bloop» was introduced into the narrative. Bloop was purposefully illustrated by a local artist, Filippo Cellini, to convey the story of one of Italy's most



iconic MPAs in a reader-friendly manner. The manual follows a structure reminiscent of conventional diving teaching materials. It's divided into thematic chapters, each with defined learning objectives. To assess comprehension, readers are presented with quizzes at the end of each chapter. Additionally, a «Bloop's glossary» is included in the final chapter to explain technical terminology to a general audience.

The manual consists of five thematic chapters, each focusing on a different aspect:

- The Origin of Tavolara Island
- Geomorphological Characterization of the Islands of Tavolara, Molara, and the Surrounding Seabed
- The Effects of Climate Change on Marine Biota
- Ongoing and Upcoming Conservation Measures in the MPA
- Understanding What I See Underwater: Different Substrates, Different Colonizers

In the next phase, this teaching material was integrated with a certification program that emphasizes ecological skills. This certification recognizes divers' ability to appreciate local biodiversity from an ecological perspective. The assessment was conducted by designated diving professionals. This model, initially developed in the pilot area of Tavolara MPA, has been shared with other teaching agencies adhering to the same safety and teaching standards at the EU level (RSTC standards). The primary target audience for this product is diving professionals and recreational divers.

During the summer season, the manual and the rationale behind the initiative were disseminated widely. This included sharing the contents with diving customers, trained divers, and locally engaged diving professionals. The information was integrated into both regular teaching activities and underwater sessions specifically focused on biodiversity and local marine ecosystems. This allowed the project to gauge the effectiveness of the manual as an additional resource to complement the existing teaching materials provided by the reference teaching agency, PSS (Professional Scuba Schools).

The outcomes of the field research activities were also shared with local authorities. These activities helped highlight ongoing threats to local biodiversity, such as ghost nets, illegal fishing practices, and unsustainable tourism. Uncommon events discovered during dives, including seagrass flowering events, the presence of alien species, and climate change-related effects, were communicated to MPA professionals.

 <https://www.facebook.com/TavolaraDiving>

Contact us to get more information about our work :
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ENVIRONAUT

Ocean Literacy Into Practice

SAILING, BOATING



TARGET AUDIENCE



nautical tourism professionals

Led by *Bundesverband Wassersportwirtschaft e.V (BVWW)*

Pioneering course for sustainable nautical tourism practices

The EnviroNaut project is dedicated to creating the pioneering Environmental Officer and CV course, designed to educate aspiring and current nautical tourism professionals. This course aims to promote good practices that can contribute to the sustainable advancement of the sector while bridging the competency gap between industry needs and workforce skills.

The self-paced online program for environmental officers is available from January 2024. The curriculum encompasses 5 modules, with the introductory module, «Value of the Ocean,» serving as a foundational and obligatory component. This module will offer comprehensive insights into oceans, inland waters, the services they provide as well as reasons to safeguard them.



The subsequent four modules will be tailored to four specific sectors:

- **Marinas,**
- **Nautical Schools and Water Sports Clubs,**
- **Skippers**
- **Boat Maintenance**

While every student has to complete the essential module 0, they have the freedom to choose modules that align with their preferences—opting for in-depth training in one or more sectors. These modules introduce best practices to mitigate the impact of activities on air, water, and land/soil, encompassing crucial topics like pollution control, waste management, institutional frameworks, and eco-management.

At the heart of the project's mission is the development of an online course that is both accessible and free of charge. While specific cities are not the focus, the project's broader objective is to engage a diverse audience across Europe. This reflects the project's ambition to equip individuals from various regions with the knowledge and tools needed to foster sustainable practices within the nautical tourism sector.



A DIP IN THE SEA

SCUBA DIVING 

TARGET AUDIENCE  tourists over 10 years old

Led by *Oceanário de Lisboa*

Immersive, educational marine experiences with Oceanário de Lisboa.

At the Oceanário de Lisboa, we are passionate about fostering ocean literacy and creating a stronger connection between people and the oceans. Our educational programs are designed to encourage learning and cultivate a deep appreciation for the marine world. One of our most recent initiatives offers tourists an extraordinary journey in the pristine waters of Sesimbra. Whether a first-time explorer or a seasoned diver, each dive promises an unparalleled encounter with the remarkable biodiversity of the Portuguese coast.

The three-hour program, tailored for nature enthusiasts aged ten and above, offers a range of options, including diving activities, try dives, and snorkeling experiences. The program includes:



- **Informative Briefing** during which the participants learn about the local biodiversity, understand the threats it faces and discover conscientious and sustainable dive practices.
- **Guided Dive** led by a marine biologist is a unique opportunity for an emotional connection with biodiversity. The divers explore natural habitats, uncover species and their behaviors, and witness the delicate balance of the marine world.
- **Final Discussion** allows the participants to reflect on their experience, record the species they encountered, share their insights, and engage in a meaningful conversation about contributing to the protection of threatened species and habitats.

Moreover, we urge participants to upload the data they have collected to a citizen science database. Thus, they actively contribute to the conservation of species, increasing knowledge about them.



Oceanário de Lisboa

👉 <https://www.oceanario.pt/>

Contact us to get more information about our work :
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POSIDONIA ESCAPE EXPERIENCE

SCUBA DIVING, SNORKELING



TARGET AUDIENCE



tourists

Led by *Plàncton, Divulgació i Serveis Marins, Plàncton Diving,*

Marine education through innovative underwater escape rooms

Plàncton, Divulgació i Serveis Marins, is a marine consulting agency driven by a profound commitment to the protection, conservation, and management of sea and coastal environments. Located in l'Ametlla de Mar, a fishing village with a beautiful coastline, our agency strives to promote the beauty and significance of this lesser-known stretch of the Mediterranean coastline.

Our work extends beyond consultancy; we've established our own diving center, Plàncton Diving, where snorkeling and diving take center stage. Through this center, we aspire to ignite a passion for the marine environment and strengthen efforts toward its preservation. To achieve this, we've developed the Posidonia Escape Experience educational program.



This unique escape room initiative is designed with three key objectives. Firstly, it aims to educate participants about Posidonia meadows—their impacts, importance, and fragility. Secondly, it seeks to inspire divers and snorkelers to explore our region beyond high tourist seasons. Lastly, it tries to reduce human pressure on the most crowded dive sites in our area.

The escape room can be experienced in three different ways: diving, snorkeling, or a family-friendly beach version. Participants, grouped into 4-6 people, immerse themselves in an engaging storyline during their underwater activities, simultaneously learning about the critical role of Posidonia meadows as an ecosystem.

The narrative revolves around Blau, a marine scientist and science communicator, dedicating her life to studying an endemic marine plant of the Mediterranean - Posidonia oceanica – that forms the large meadows around l’Ametlla de Mar. However, her research is sabotaged, leaving her investigations incomplete. Participants become crucial players in helping Blau by undertaking tasks that involve critical thinking, and physical and diving abilities. Each completed task contributes a piece



to a puzzle, unveiling the impacts on Posidonia meadows. As they assemble the puzzle, participants gain insights into the various challenges Posidonia meadows face. The ultimate goal is to close the puzzle in a symbolic gesture to eliminate these impacts.

This project has been carried out within the framework of the Medusa Project as one of the winning proposals in Catalonia of the “Mediterranean sub-grantee Adventure Tourism Competition” that supports the creation of sustainable and innovative adventure tourism products, and in Catalonia, it is coordinated by the Barcelona Chamber of Commerce.



👉 <https://www.planctondiving.cat/es/>

Contact us to get more information about our work :
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ENGAGING WITH LOCAL COMMUNITIES

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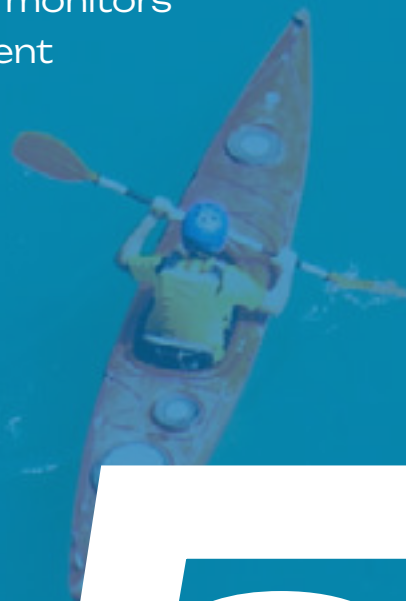
OCEAN LITERACY FOR COASTAL COMMUNITIES IN E

Pilot program in Ecuador integrates ocean education, ecotourism, and eco-entrepreneurship

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SEA KEEPERS NETWORK

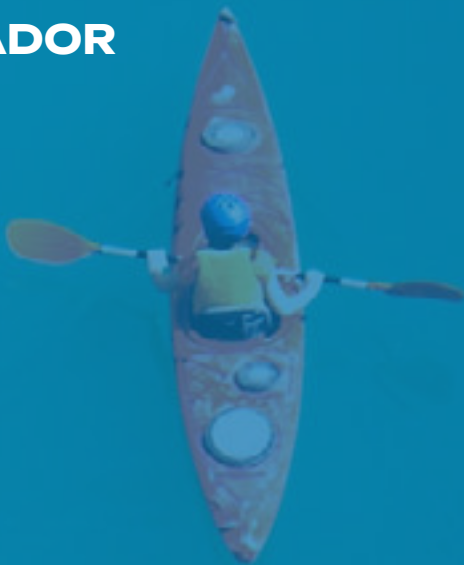
Collaborative network actively monitors and protects marine environment



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CUADOR



As mentioned in the previous chapter, the increasing popularity of water sports has the potential to bring impacts to the environment, local economies, and most importantly communities. The growing numbers of sports enthusiasts attract tourism, and as water sports practitioners become business owners, they often relocate, bringing their services and lessons to new locations. This not only affects the industry but also leads to changes in local communities, which can be either positive or negative.

Former fishing villages may transform into top tourist destinations, and local communities may be forced to change their occupations. Sometimes these changes occur uncontrollably, catching unsuspecting communities off guard. However, in some cases, communities evolve gradually, foreseeing upcoming changes and adapting in a timely manner.

Therefore, fostering collaboration among local stakeholders, including communities, business networks, universities, research centers, civic groups, governments, and municipalities, is essential. This collaboration aims not only to promote an ocean-literate society but also to help communities adapt to the changing ocean.

In this chapter, we present initiatives that focus on working with local communities and strengthening local connections, emphasizing the importance of adaptation to the new oceanic reality. These efforts showcase the significance of proactive engagement with local stakeholders to ensure a sustainable balance between water sports activities, environmental protection, economic development, and community well-being.

OCEAN LITERACY FOR COASTAL COMMUNITIES IN ECUADOR

«Programa de Educación Oceánica para Comunidades Sostenibles de Ecuador»

SWIMMING, SCUBA DIVING, SNORKELING 

Led by *Amiguitos del Océano (an initiative of SeaLife Diving)*

Pilot program in Ecuador integrates ocean education, ecotourism, and eco-entrepreneurship

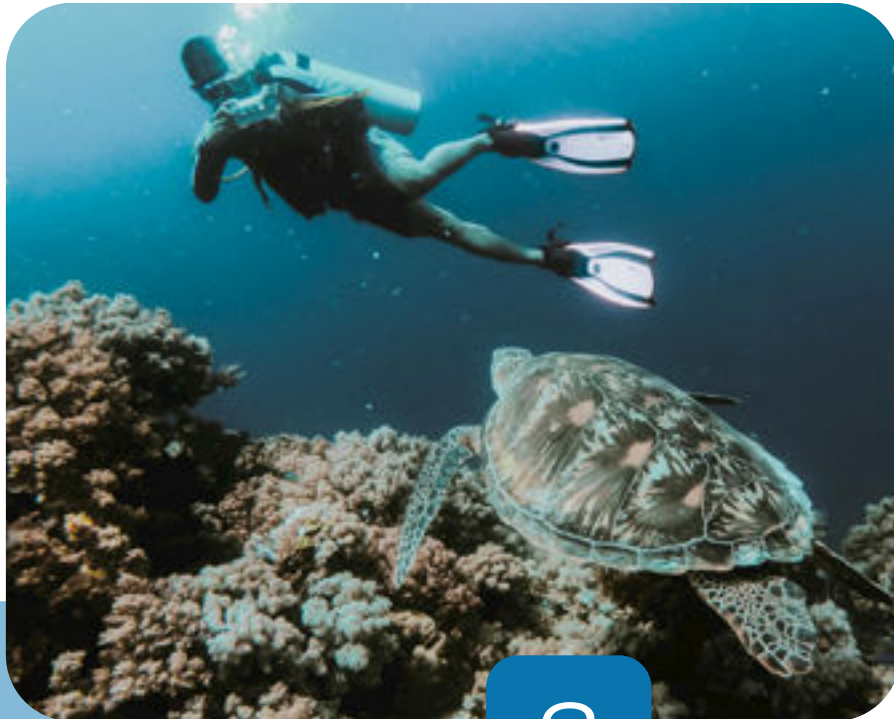
Ocean Literacy for Coastal Communities in Ecuador is a pilot program encompassing three fundamental pillars: Ocean Education, Ecotourism, and Eco-Entrepreneurship.

Our primary objective is to acquaint local coastal communities with the sea, fostering understanding and care. This is achieved through marine education programs tailored to align with community activities. Each program is deeply rooted in the local context and identity, catering to the specific needs and interests of the beneficiaries.

We initiated data gathering about the community in August 2021, and by 2022, we launched our first project. Currently, we are running three distinct projects designed to engage various stakeholders and community members:

1

The Ecoclub: This is a 10-month program tailored for local children aged 6 to 12, aimed at shaping them into community eco-leaders. Our focus is on instilling a profound understanding of the ocean's value, particularly in the context of Ayangué, an area directly influenced by a marine reserve. With one 2.5-hour session per week for 10 months, we cover topics such as sustainability, protected areas, ocean culture, and its 7 principles, etc. In addition to these sessions, we organize outdoor activities, such as intertidal tours, visits to protected areas, whale watching, and beach clean-ups. With the use of data collected in our program we established that out of the 10,000 children living in 34 coastal communities, a staggering 63% did not know how to swim, despite residing so close to the sea. Therefore we initiated a pilot project called EcoDivers to teach local children how to swim and snorkel, enhancing their connection with the ocean and encouraging shoreline clean-ups.



2

Ocean Education for Artisanal Fishermen: This program spans two months with two weekly sessions, aiming to foster a more conscious relationship with the ocean among fishermen. It seeks to impart the importance of adopting sustainable fishing practices and guides them in formulating actionable plans for each trained group. The fishermen's program includes sessions on sustainability, protected areas, ocean culture, the 7 principles of ocean culture, and good fishing practices. Towards the end of the program, we introduce a problem tree elaboration exercise, where fishermen identify problems, their causes, and consequences. Based on these findings, they prioritize one issue and develop an action plan. The fishermen have primarily focused on addressing marine litter in their communities.

3

Young Native Guides (CTC): This program imparts specialized oceanic education tailored for tourism. The young guides learn to enhance their techniques for sharing oceanic culture with tourists, including whale watching, marine reserve visits, and diving guides. Additionally, we provide training in subtidal monitoring techniques, enabling data collection on coral health within the marine reserve. While still in progress, our surveys indicate that these young guides are actively disseminating the knowledge they acquire. Each guide is certified by an international school, providing the necessary diving equipment as part of the certification process. Furthermore, we've collaboratively created species identification cards for visualizing emblematic species, which are also used during EcoDivers sessions.

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Participants of all three initiatives, take part in monthly collaborative cleanup initiatives. CTCs who are trained diving guides work on the seabed, extracting debris and coral nets from protected zones, while others conduct beach cleanups in the area. These cleanup events often involve 60 to 100 participants. To date, we've received assistance from over 2,700 volunteers since 2018. In locations with established EcoClubs, monthly cleanups are a routine activity, typically involving 15-25 participants.

A sample of the collected trash is systematically retained, especially for research purposes, such as cigarette butts used in a university thesis. Recyclable materials are delivered to local collection centers, encouraging grassroots recycling efforts. Unfortunately, the majority of waste collected is disposed of at the local rubbish dump, as more sustainable alternatives are yet to be established.

Our efforts have made a significant impact, with statistics indicating that from 2018 to 2022, we've collected a staggering 5.98 tonnes of waste.





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**Amiguitos
del Océano**

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SEA KEEPERS NETWORK

«Itsas Zaintza Sarea»

ROWING, KAYAKING, SCUBA DIVING 

TARGET AUDIENCE  tourists

Led by *Mater Museoa*

Collaborative network actively monitors and protects marine environment

The Environmental Surveillance Network (Itsas Zaintza Sarea) is a collaborative initiative comprising all interested sea users including maritime workers, sea enthusiasts, and water sports practitioners. Established by Mater Museoa in collaboration with the Department of Environment and Hydraulic Works of the Provincial Council of Gipuzkoa (Basque Country), our network's mission is to leverage the collective knowledge of the sea for its defense and protection, advocating for the conservation of this vital ecosystem.

Participants, including rowers, swimmers, kayakers, fishermen, divers, etc. actively engage in coastal surveillance during their daily activities at sea. We use monitoring sheets to collect data and provide valuable information on the environmental status of the sea beyond the marine environment.





We organize quarterly meetings to facilitate the **sharing of observations and experiences**, fostering a sense of community and shared responsibility.

The network also plays a crucial role in promoting good environmental practices within the local community. It provides environmental awareness resources to affiliated entities, contributing to the establishment of sustainable practices. The ultimate goal is to unite and coordinate sea surveillance efforts, showcasing the impactful work of the network's entities to the wider society.

An example of an activity conducted by our Network as a commitment to environmental stewardship is a joint waste collection across the six major river

basins of Gipuzkoa. On November 26th, conditions permitting, maritime agents and users will collaborate on a synchronized waste collection in their respective river basins.

This initiative not only emphasizes the collective responsibility of our Network but also serves to highlight the collaborative efforts of its members. Additionally, joint training sessions are being conducted to enhance environmental practices and deepen understanding of the marine ecosystem and its vulnerabilities. Together, the Environmental Surveillance Network strives to create a visible and impactful force for the care and defense of the sea.



GOOD PRACTICES IN PROFESSIONAL SPORT

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Pro windsurfer advocates sustainability, educates on ocean conservation

78 **EARTHBOUND**

Yachting Association builds green community, and adopts sustainable practices for events and office work

6

SPORTS

Sports organizations and professional athletes may play a crucial role in steering water sports toward sustainable practices. These entities often spearhead the development of their disciplines, influencing trends in sports and environmental approaches.

Many sports organizations and associations serve as nurturing grounds for aspiring athletes, providing support, training, and management. Professional athletes and practitioners, along with coaches and representatives of sports organizations, are deeply committed to their disciplines, dedicating themselves to sports practice year-round, regardless of weather conditions. Their frequent and intimate interaction with the natural environment makes them the first ones to experience any environmental degradation. Given that their careers, major income sources, and well-being depend on water conditions, sports organizations, and professional athletes are particularly vulnerable to environmental challenges. Therefore, they are often the “first responders”, actively supporting and implementing initiatives to protect their “playground”.

With substantial recognition within the water sports community, both sports organizations and professional athletes possess the potential to reach vast audiences of sports enthusiasts. They serve as inspirational figures, encouraging others to adopt sustainable water sports practices and participate in marine conservation efforts.

This section highlights initiatives from professional athletes and sports organizations that drive positive change, sustainability, and ocean conservation. Through setting examples and advocating for ocean protection, these entities contribute significantly to the broader goal of preserving our marine ecosystems.

ADVOCACY

PRO WINDSURFING 

TARGET AUDIENCE  general public

Led by *Federico Morisio - professional windsurfer*

Pro windsurfer advocates sustainability, educates on ocean conservation

« I was born and raised in Turin, Italy, but I was lucky to travel internationally from a young age thanks to my parents' passion for traveling and sports. In fact, my dad taught me how to windsurf when I was 8 years old in Corsica, France, and since then every summer holiday was dedicated to windsurfing. Besides my passion for traveling and sports, I'm also really grateful to my parents for the education they gave me; they taught me to respect the environment through simple but powerful actions like never throwing something on the ground, always recycling, turning off lights, saving energy, saving water and most of all realizing that resources aren't infinite. When at 19 years old I decided to go all-in on my dream of becoming a professional windsurfer, I started traveling around the world to train and compete, and I thought that this type of education





and way of doing things were normal; I thought that everybody felt connected to the planet, that everybody wanted to protect it and respect it. But soon enough I realized that it wasn't the case. I could see that people didn't know the impact of their daily choices and actions; that they didn't understand how everything on this planet is connected, making what's harmful to land, ocean, and animals, also harmful to us. Through the years, I got to educate myself more, have powerful conversations with experts, and become part of environmental organizations that had my same mission: raise awareness on this topic, educate people on the impact of their actions and decisions, and inspire them to change through action.

First of all, I believed that if I wanted to be a leader in this topic, I had to lead by example. So I worked on making my lifestyle more sustainable, analyzing the main areas of my life: food, transportation, energy, and clothing to start with. My goal is to reduce my impact in each one of them, that's why

I started a plant-based diet that reduces my food carbon footprint by about 70-90%; then I get all my transportation emissions compensated by my windsurfing sponsor through the planting of mangroves; I mostly buy used clothes and try to get my older ones repaired; and finally I aim to stay in houses (while I'm traveling to train and compete) that get energy from renewable resources. Besides these things that I do on a personal level, my overall goal is to raise awareness and educate people on the importance and functions of the ocean for life on Earth, make them understand how interconnected to it we are so that we can all together take action «from the bottom» and push institutions, governments, and companies to make better laws and agreements. At the same time I work with NGOs «from the top», supporting their campaigns, in order to put pressure on governments and institutions by proposing laws, stopping acts, and making them feel more accountable.

With my work, I hope to educate millions of people and inspire them to change their perspectives, and consequently their actions. While also pressuring institutions, governments, and companies towards more responsible and positive policies that can protect the ocean. As a windsurf athlete, I'm so grateful for all that the ocean provides me and I feel a duty to do my best in order to preserve its health, which at the end of the day, also directly means our own health as human beings and societies. »

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EARTHBOUND

SAILING



TARGET AUDIENCE



sailing practitioners, general public

Led by Polish Yachting Organization (Polski Związek Żeglarski)

Yachting Association builds green community, and adopts sustainable practices for events and office work.

In early 2023, the Polish Yachting Association (PYA), started implementing a sustainable development strategy accepted by the PYA Board. Our primary objectives revolve around promoting pro-environmental activities and sustainable practices. This encompasses a range of initiatives such as reducing water pollution, limiting CO₂ emissions, minimizing raw material consumption, and fostering environmental education, particularly among the younger generation. The strategy is implemented in three key areas: office spaces, sailing events, and the green society of «watermen». Our overarching goal is to highlight the significance of the green transformation.



Sailing Events:

Our sustainable development strategy for sailing events entails the establishment of strict guidelines that are consistently followed during regattas. These guidelines encompass waste segregation, the provision of drinking water dispensers, and the elimination of plastic dishes and bottles. The regatta office follows accepted standards, including the use of electronic announcements, communication via a WhatsApp group, and minimizing paper documentation.

Notably, during the 24th edition of the Gdynia Sailing Days festival, we received the prestigious «Clean Regatta» certificate for organizing the Junior European Championships in the ILCA 6 class with a commitment to sustainable development. The certification, awarded by the Sailors of the Sea organization, attests to our dedication to environmentally conscious regatta organization.



Gdynia Sailing Days Green Zone:

Beyond basic eco-activities integrated into the sailing regatta organization, we implemented additional initiatives during the Gdynia Sailing Days. This included competitions, lectures by WWF Blue Patrol professionals, serving meals in biodegradable dishes, marking bicycle parking spaces, and conducting a major cleaning effort at the beach and marina.

Green Society:

Our vision for an ecological sailing society is centered around building a community committed to environmental care. The PYA aims to engage clubs, associations, competitors, amateur sailors, and external partners in ecological activities, fostering a collective expansion of sustainable development strategies. In November, we established the PYA Green Team, a group of green ambassadors who serve as a public face for green activities.

Promoting Green Steps:

Regular promotion of pro-environmental activities is conducted on our social media under the «EarthBound» hashtag, which serves as a showcase for all environmental initiatives undertaken by the PYA and our green ambassadors. Additionally, we actively contribute to ecological education by creating guidelines based on observations, interviews, conversations, and scientific research. These guidelines are tailored for various sailing groups, including clubs, coaches, competitors, judges, organizers, and partners.

All these valuable resources are available for download on our website.

Office Work:

Our commitment to sustainability extends beyond public events to our day-to-day office operations. Aligned with our strategy, our main goal is to reduce energy, water, and paper consumption. We have adopted principles such as electronic document circulation, and communication within the company using online tools and email.

We've introduced waste segregation, practices to save drinking water through the use of filters and reusable dishes, and a conscious reduction of paper consumption and sustainable printer use. This includes reusing paper and setting printers to double-sided and black-and-white printing. Sustainable behavior is actively promoted in both social and office spaces through dedicated signs reminding individuals to save energy. We also prioritize suppliers who share our commitment to sustainability.



POLSKI ZWIĄZEK
ZEGLARSKI
POLISH YACHTING
ASSOCIATION

www.pya.org.pl/polski-zwiazek-zeglarski/page/kurs-na-ziemie-ekologiczne-zeglarnstwo-pzz/

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