# European Blue Schools

magazine

Network of European Blue Schools

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> ***Education is the most powerful weapon which you can use to change the world.***
>
> **Nelson Mandela**

This publication offers a glimpse into the **Network of European Blue Schools**: its origins, purpose, and - most importantly - the inspiring practices of educators who are weaving the ocean into their teaching. Through their stories, we explore not only innovative educational methods but also the personal journeys that have led teachers and students to become champions of the sea.

What began as a simple effort to map ocean education in schools has evolved into a growing global movement - **with Europe leading the way in bringing the ocean into the classroom.**

# Table of contents


**Foreword** 6

**A Growing Wave of Change** 10
Intro

**A Whale, an App and a Movie** 12
Austria

**‘I’m off to maths. You?’ ‘I Have Ocean Science Now.’** 16
Belgium

**One Species at a Time** 20
Croatia

**Children Taking the Reins of Biodiversity Conservation** 24
France

**How a Hundred Mallorcan Schools Joined the Blue School Network in Just One Year** 28
Spain

**‘Never Thought Sea Squirt Could Be So Tasty’** 32
Sweden

**From Blue School to Blue School Municipality** 36
The Netherlands

**Partners in Learning** 42
Intro

**Stories on the Shore** 44
Italy

**From Tires to Transformation** 46
Canary Islands

**From Local Waters to National Change** 48
Spain


## Dear reader,

**You're holding the very first edition of our Blue School Magazine, a collection of inspiring stories from Blue Schools across Europe. But what exactly are Blue Schools?**

**Sandra Castañer, Evy Copejans, and Dominika Wojcieszek** explain it all in a special interview.

Sandra is a Policy Officer at **DG MARE**, which develops and implements the European Commission's policies on maritime affairs and fisheries.

Evy is the Director of **EMSEA**, a European organisation that connects marine (science) educators across Europe and beyond.

Dominika is EMSEA's **Blue School Officer**, standing at the frontline of the Network of European Blue Schools every day.

**Sandra, you are Policy Officer at DG MARE. Can you explain what DG MARE does?**

**Sandra:** Our main role is to develop and implement the European policies related to the sustainable use of our ocean. We make sure that all activities in European waters help build a better future for the environment, society, and our economy.

**Over recent years, ocean literacy has become a priority for the EU. Why is that?**

**Sandra:** The ocean is at the heart of so many things: regulating climate, supporting biodiversity, producing jobs. Ocean literacy helps raise awareness, not only of the ocean's value but also of careers in the marine and maritime sector, which is key to a sustainable blue economy. That's why ocean literacy is a top priority, and we promote this through our EU4Ocean coalition, of which the Network of European Blue Schools is an important element.

**How did this network come into existence?**

**Sandra:** At DG MARE, we don't just shape policy, but we also fund and steer projects that support our mission. The Blue Schools initiative began as a two-year pilot in 2020, following a European Parliament suggestion to launch a coalition to improve society's knowledge of and connection to the ocean. Thanks to its strong results, we continued funding it, and we're now looking to scale it up even further.

**Evy, how does EMSEA connect to that story?**

**Evy:** EMSEA brings together marine scientists and educators to share best practices in ocean education. Around ten years ago, we joined Sea Change, one of the first projects funded specifically for ocean literacy. In this project, we discussed the feasibility of establishing blue education in some of the participating countries. Portugal, as a true maritime nation, took the lead and made it a success. Because of our expertise and involvement in blue education in Europe right from the start, we became an important partner in the Blue Schools project and eventually took the lead in running the Blue Schools Secretariat.

**How did the Network of European Blue Schools evolve over the years?**

**Evy**: At first, our focus was on identifying and mapping schools already engaged in blue education. Over time, the initiative evolved to engage schools unfamiliar with ocean education, providing them with the support, resources, and tools to help them integrate ocean literacy into their teaching.

**Dominika, you're at the frontline of the Network of European Blue Schools, connecting with teachers on a daily basis. What makes a school a Blue School?**

**Dominika:** The will to learn more about the ocean. It's not about being near the coast or having a scientific focus - any school can be a Blue School. Projects can range from artistic creations to hands-on experiments, from exploring maritime culture to diving into ocean technology. Whether students create a podcast, a theatre performance, or a guided walk

for tourists, it all starts with a simple desire to learn more about the ocean.

**How does a school transition from being "blue at heart" to being an official Blue School?**

**Dominika:** The schools need to fill out an application, which we then evaluate. Some schools are hesitant to submit their application because they don't meet all the criteria from the start, or they're not confident in writing the application in English. But we're not just assessing what's on paper; we look for potential and passion. If they need support with the application or even with shaping their ideas, I'm here to guide them every step of the way.

**What are some success stories or inspiring examples you've seen from Blue Schools so far?**

**Dominika:** I admire the Vienna project (see page 12) a lot because they succeeded in some really impactful projects, despite being a landlocked country. I also love the Blue School Municipality concept from Den Helder (see page 36), a brilliant way to involve as many schools as possible in one city and really boost collaboration between schools and teachers. But I also have deep admiration for small projects that emerge in countries with few or no Blue Schools. It takes real courage to be a pioneer. These schools have the potential to spark something bigger, to inspire others, and start a ripple effect across their country.

**If you could invite every school in Europe to take one simple action to become more ocean literate, what would it be?**

**Sandra:** Every little action counts, no matter how big or small. Inviting a marine expert to give a talk at school, doing a beach or river clean-up, creating art, … Anything that truly sparks a connection between students and the ocean is worth doing.

**Evy:** That's true. Just start with one activity. You don't have to become a full-scale Blue School right away. You can grow into it gradually. Often, it begins with one person taking ownership and leading the project year after year. So perhaps that one action could be appointing an ocean ambassador at your school.

**Dominika:** To me, that one action is probably reaching out. Many teachers don't know where to start, so they could just begin by emailing info@blueschools.eu and asking for help. There is a whole support system here for them. They're not alone.



**What are your dreams for the future?**

**Dominika:** I'd love to see teachers across all EU Member States recognize the value of working together and feel supported and empowered as part of a larger community.

**Sandra:** And I hope the network continues to grow! My dream is to see Blue Schools all over Europe – by the sea and far inland – become a great example for other regions in the world.

**Evy:** Absolutely. And in the long term, it would be amazing if this work helped make blue education a formal part of school curricula in all EU Member States.

# A Growing Wave of Change

> ***Education is the passport to the future, for tomorrow belongs to those who prepare for it today.***
>
> **Malcolm X**

Over the past five years, the **Network of European Blue Schools** has grown into a vibrant community of over 680 members across 26 EU countries - and nearly 200 more members from surrounding nations who share its values and vision for ocean education. Together, they have created and carried out more than 1,000 projects, engaging over 100,000 students in activities that bring the ocean to life in classrooms and communities alike.

This chapter offers a snapshot of some of the most impactful and imaginative practices from across the network. These projects not only earned schools the official EU Blue School recognition, but more importantly, helped foster a deeper understanding of the ocean among Europe's youth - one lesson, one experience at a time.

VIENNA, AUSTRIA

# A Whale, an App, and a Movie

## How an Austrian school spreads the word about marine pollution and sustainability

At an average of 230 metres above sea level and – as the crow flies – 340 kilometres away from the nearest coast, landlocked Vienna might not seem the most obvious place to grow an ocean connection. However, for the students at the Draschestraße Vienna Bilingual School the ocean is closer than you'd think.

### Optional courses: Marine Biology and Sustainability

In Austria, schools offer both mandatory and elective courses. At the Draschestraße Vienna Bilingual School, two elective courses available for students aged 16 to 18 are Marine Biology and Sustainability. The Marine Biology module is offered every two years and covers marine organisms and their adaptations across various habitats, from sandy shores and tropical coral reefs to the deepsea. It also examines human impacts on these ecosystems, with a focus on fisheries' effects.

The Sustainability module addresses human impacts on terrestrial and marine ecosystems and ways to mitigate them. This course also explores the societal connections to sustainability. For example, in a project last year, the students investigated how sustainability topics are incorporated into the Austrian school curriculum and textbooks. They rigorously analysed teaching plans and textbooks, comparing them to UNESCO's sustainability education criteria, and surveyed both teachers and students on their experiences and challenges with integrating sustainability at school. The students compiled a comprehensive report of their findings and sent it to key national and international stakeholders in sustainability education, prompting a wealth of responses.

### The Last Whale

However, what the school is most known for are the art projects initiated by biology and art teacher Peder Hill. 'There are many different ways to bring forward a message to the public, but art is an extraordinarily powerful one,' Peder explains.

Carrying the soul of a Californian surfer and the wisdom of an environmental scientist, Peder ended up in Austria in 2003, following the woman of his dreams. But even in landlocked Vienna, his ocean love didn't diminish. Confronted with plastic pollution as a surfer, as a teacher he wanted to bring this experience to his students. Telling his 12-year-olds about this during an art class in 2018, they were appalled by his stories. 'These were exceptional kids,' Peder reminisces. 'I decided to introduce them to the ocean's plastic pollution problem. It was the first time they heard about it, and they were horrified. So, I asked: what do you want to do? Shall we build something to try to bring attention to it? They were so enthusiastic to have a chance to do something meaningful. That's when they built a 5-meter-long humpback whale sculpture from plastic bottles and rubbish, called The Last Whale.' It took six whole months for the kids to finish the project and the result was amazing. However, once it hung at the school's ceiling, one question lingered: what now?

### Whale sculpture and face painting photo exhibition

'The Last Whale was meant to spotlight the issue of global plastic pollution, but at first, it barely made a ripple, just hanging in the school,' Peder explains. 'We wanted to do more, so I thought: why not reach out to the UN?' And so, the journey began. On June 5th, 2018, the whale travelled to the United Nations Vienna International Centre (VIC), where it was displayed at the Beat Plastic Pollution event, part of World Environment and Ocean Day. The installation was paired with a striking photo exhibition, created by students from Peder's previous art classes in collaboration with a local makeup art school, using face painting to vividly depict the effects of marine plastic pollution.

### UN Children's Clean Ocean Summit

But Kids Save Ocean – as the interconnected projects came to be known – didn't stop there. 'I thought: why not organise a UN conference for these children?', Peder continues. He pitched his idea to the UN and then spent weeks going back and forth between them and his students. 'The children were the ones who decided on all the elements, the structure, the content. They ran the entire thing; I was just the go-between. It really was a youth-powered project,' Peder testifies.

On June 22nd, almost 300 children from different Austrian schools came together at the UN VIC for the Children's Clean Ocean Summit, where they taught each other about the problems of and solutions to plastic ocean pollution. At the end of the summit, they prioritised what they thought should be done and wrote this down in the Children's Clean Ocean Declaration, which was then mailed to every world leader. 'It was amazing,' Peder recalls. 'We received heartfelt responses from presidents, prime ministers and dignitaries across Austria, Croatia, Slovakia, the Czech Republic, the Netherlands, Puerto Rico, Canada, South Korea… Even the Pope, Queen Elizabeth, Prince Albert of Monaco and David Attenborough wrote to us.'

Since 2021, these letters have been on display at Vienna's Haus des Meeres aquarium, which welcomes almost a million visitors a year. The letters are part of a Kids Save Ocean exhibit, where visitors can read the Children's Clean Ocean Declaration and admire the Last Whale sculpture. 'The whale is in its fourth exhibition now,' Peder smiles. 'We built it to swim and then educate, inspire and drive impact. It's also been part of the Art of Sustainability exhibit at the Austrian Academy of Sciences in 2019, and images of it were included in the Ocean Plastics Lab, an internationally traveling exhibition from

Photographer: Alex @VlightPhotography
Credits: Kids Save Ocean

Germany's Federal Ministry of Education and Research.' The Haus des Meeres exhibit also informs people about the FateChanger app, developed by Peder, his students and a global team of volunteers.

### FateChanger app

'My experience at the UN showed me how important it is to give children a voice,' Peder says. 'Children are remarkable. They deserve a say in the political process and we must empower them to be heard.' That is where the FateChanger app comes in. 'The app aims to educate and empower children to influence environmental policy,' Peder explains. 'It provides resources like videos and lesson plans on plastic pollution, climate change and sustainability. Students can then use their knowledge to participate in a letter-writing campaign to world leaders and local policymakers, with age-specific, step-by-step guidance to help them craft their own messages, as well as participate in student-driven citizen ballot initiatives.'

Peder didn't create the app alone. Via VolunteerMatch, over 600 volunteers from around the world offered their help with the Kids Save Ocean projects. 'There was a massive team involved, which was especially critical for developing the app,' Peder says. He collected feedback from students on the app's layout and design, which the programming team implemented. Volunteers also gathered contacts for political leaders and conducted extensive research on the topics offered in the app.

The app is currently available on iOS and will soon launch on Android. 'We hope this will give the app a bigger reach. Sending out the Children's Clean Ocean Declaration made an impact with some leaders, but that was temporary. The app has the potential to become a transformative tool with even greater impact,' Peder says.

Photographer: Livia Voss
Credits: Kids Save Ocean

### FateChanger teaser

Peder's students also created a powerful teaser for FateChanger, raising their fists in a passionate battle cry (scan QR code below). One girl, just 17, took charge as director. She filled the art room with images of ocean pollution and asked students to choose one that really resonated with them. They were then asked to unleash their feelings on camera. 'It was like capturing fire,' Peder proudly recalls. 'And they did it all themselves.'

### Rise, Fall, Hope

Recently, Peder used film as a medium in another – internationally recognised – project as well. His 14-year-old art students created a 6-minute film called Rise, Fall, Hope showing how human creativity fueled the Industrial Revolution and a harmful linear economy. The film advocates for a shift to a circular economy and calls for societal change using that same creative force. Made with green screens and trash from the school dump, the simple yet powerful film was selected by 54 film festivals across 21 countries and won many awards, including one personally presented to the children by Austrian Environmental Minister Leonore Gewessler. Without a doubt, the Draschestraße Vienna Bilingual School is a great example of how school projects can cause impact far beyond the playground.

However, what this Blue School maybe best illustrates, is how this impact is caused by believing in the capabilities of children and empowering them to take control. 'There are so many brilliant, passionate, artistic kids out there. If you give them the chance, they will rise to the occasion,' Peder says decisively. 'Over the years, they have made me so proud.' Hearing Peder, it seems that – if you leave it to the kids – we have a brilliant future ahead.

Click here:

Teaser
FateChanger app

Click here:

Video
RISE FALL HOPE

## Marine plastic pollution

Plastic pollution in the ocean has gained more and more attention over the past few years, leading to the EU wanting to ban single-use plastics by 2030. But for now, massive plastic islands still exist in the ocean and they keep getting bigger. Abandoned fishing gear is strangling marine species and plastic bags are eaten by turtles and whales every day. Plastics also exist in a form invisible to the naked eye: in paint, cosmetics, clothing. They're created through tire wear every time you drive your car. Through our wastewaters, they end up in our ocean. As a consequence, scientists find microplastics in seawater, sea salt, sea air and in every single marine organism, be it plankton, bottom dwelling species, fish or marine mammals. Since plastic fragments are known to adsorb contaminants, both enter the digestive systems of marine species. The impacts are mostly unknown, but some are damaged organs, issues with reproduction and intoxication. Without a doubt, this has repercussions all through the food web, including for humans who feed on seafood.

Teaching children and the broader public about the risks of plastic pollution, the benefits of a circular economy and the impacts of our consumption behaviour is an important step towards less marine pollution in the future.

AVELGEM, BELGIUM

# ‘I’m off to Maths. You?’ ‘I Have Ocean Science Now.’

## On embedding marine science in a Belgian school’s curriculum

Somewhere in the Belgian countryside, along the river Scheldt, lies the secondary school Sint-Jan Berchmanscollege. During lunch break, the playground is buzzing with 12- to 18-year-olds, talking, laughing, and listening to the music played by one of the DJing students. Just another secondary school, you’d think. Not quite, as this school offers something no other Flemish school does. Here, a most unique course is taught: Ocean Science, recently added to the school’s 6th-grade STEM curriculum.

### Embedding ocean science in the curriculum

The man responsible for the initiative: Tim Deprez, currently a teacher at the school but previously a marine science researcher at Ghent University. With over 20 years of experience in the field, he wanted to pass on his skills to the next generation.

A recent Flemish education reform allows secondary schools to fill in a couple of hours themselves, apart from the compulsory curriculum. While most schools choose to add some extra hours of maths, languages or IT, Sint-Jan Berchmanscollege, on Tim’s suggestion, decided to add one hour of Ocean Science per week for all 6th-grade students (ages 17 to 18) in a science-oriented track.

### Interdisciplinary course

The decision proved to be quite a challenge, as there are no existing handbooks for such a course. ‘Often, what is available regarding marine education, is focused primarily on primary grades or short-term projects. For secondary schools, existing materials are more limited, especially if you want to fully integrate marine science during the course of a whole year,’ Tim explains. Therefore, he created an interdisciplinary course from scratch in which the students are exposed to all sorts of fields, including geology, chemistry, biology, ecology, physics, technology, and even history and culture.

On a sunny day in October, Tim talks to his students about the recent development in ocean exploration using submarines, remotely operated vehicles (ROVs), and sensors. In a spontaneous and humoristic style, he constantly links the course content to real life examples in scientific research or pop culture. He refers to the Deepsea Challenger expedition led by James Cameron, director of Avatar and Titanic. He shows a Suske en Wiske comic that mentions the first bathyscaphe submersible invented by Piccard. He refers to recent scientific research using sensors on seals. He even links newspaper articles with local job opportunities, mentioning a robotics company in Ostend.

### Field trip to Cap Blanc Nez

Apart from the lessons in the classroom, the students also have a practicum, are engaged in a wiki-project, go on a field trip to the French Cap Blanc-Nez, and visit Nausicaá, Europe’s largest aquarium . ‘In Cap Blanc-Nez, we researched the link between ocean and geology. We had a look at the chalk cliffs and looked for fossils at the beach. There also was a biology component, in which we consolidated some of the knowledge acquired in the 4th grade concerning classification of organisms and new study materials regarding marine ecosystems, such as the intertidal system of Cap Blanc-Nez.’ Upon arrival at the beach, the students were first lounging around. ‘Nothing much to see,’ they must have thought. Until one of them turned over a rock and a crab appeared. ‘In no time, there were all these excited 17-year-olds running around at the beach, showing each other what they had found, identifying the organisms with an app called Obsidentify, looking them up in guides, catching fish, digging in the sand looking for worms, … These are expereiences you can’t offer in the classroom,’ Tim says. Two and a half hours later, the students had discovered animals from many different phyla, from sponges to cnidarians. A guided tour behind the scenes at Nausicaá made the day complete.

### Wiki-project

Some of these students will be able to use the knowledge acquired during the field trip in their wiki-project. ‘The wiki-project is a project we

Photographer and credits: Tim Deprez

run during the first semester,' Tim explains. 'Each student chooses a topic from a catalogue. The topics vary greatly: ocean acidification (see box), microplastics, underwater acoustics, piracy, ocean and arts, aquaculture, legal issues at sea, species' adaptations to a saline environment, sustainable seafood labels, sand mining.We offer a wide choice so anyone can find something of their interest. And because ocean science is so broad, we can't possibly teach them everything in just one year. This way they at least get a taste of the gigantic field of marine sciences.'

The goal of the wiki-project is to write a webpage on a certain topic. The end result must be well-structured, well-illustrated, and well-sourced. 'They need to act as scientists: select a topic they want to find out more about, do research, critically evaluate their sources, and end up with a clear and concise summary on their subject. Also, they need to read up on each other's projects and link their own research to that of their peers in order to learn more on the interconnectedness of all these issues.'

The variety of topics is clearly appreciated by the students. One student said: 'No one will find everything interesting, but everyone will find something interesting. That's the fun of this course.'

### Practicum

Another way to consolidate their knowledge is the practicum in the second semester. This is a group project in which small groups work together to put basic scientific measuring techniques into practice, related to e.g. currents, turbidity, waves or bioluminescence. For example, one group will do water measurements in the river Scheldt. They'll measure turbidity using a Secchi disc and stream flow using several techniques ranging from an orange to Arduino-based GPS floaters. Afterwards, the students will share their experiences with each other so the whole group can learn from them.

The full package of course materials, field trip, wiki-project and practicum is now embedded in this school's 6th-grade STEM curriculum and will be repeated every year. This year, the course is only taught to about twenty STEM students. However, starting next year, the goal is to also include language students, expanding the course to about 40 students each year.

'Of course, what would be really amazing,' Tim says, 'is if we would succeed in making this course available to other schools and training other teachers to give these lessons as well. For that, we need funding and an organisation like EMSEA to support that and help with the coordination.'

Photographer and credits: Tim Deprez



The answer to whether all this effort is worth the while? 'Yes,' Tim emphasises. 'A number of my students have indicated that this course brings new ideas for studies or job prospects. Before, they hardly even knew this field existed.'

The students seem to agree. 'I'm definitely considering a future in marine science due to this course,' one student said. Another testified: 'I find the learning material really interesting. I have never really thought about doing something in marine sciences before, but it's certainly worth considering.'

Photographer and credits: Tim Deprez

## Ocean acidification

Ocean acidification is a chemical process in which the pH of the ocean decreases, making seawater more acidic. At the root of the process is human activity.

Since the Industrial Revolution, the burning of fossil fuels and changes in land use have led to an increasing concentration of $CO_2$ in the atmosphere. Around 30% of this atmospheric $CO_2$ is absorbed by the ocean, causing oceanic $CO_2$ levels to increase as well.

Higher levels of oceanic $CO_2$ make seawater more acidic and reduce the availability of carbonate ions, which many marine organisms use to build their shells and skeletons. In an acidic ocean, shells are at risk of dissolving, so clams, oysters, mussels, corals, calcareous plankton, and many other organisms may struggle to form their protective structures.

This not only disrupts dependent food webs and ecosystems but will also have drastic consequences for global shellfish aquaculture.

ZADAR, CROATIA

# One Species at a Time

## How a Croatian school teaches its children about Mediterranean biodiversity

It's September in Croatia. At the University of Zadar, an Adriatic breeze causes the curtains of the conference room to dance. Today, over a hundred marine scientists and educators gather to talk about ocean literacy and Blue Schools at the annual EMSEA conference. One of the attendees is Sandra Tomić, a teacher at Šimun Kožičić Benja Elementary School in Zadar and a recent ocean enthusiast.

Sandra has been teaching at Šimun Kožičić Benja for fifteen years. The ocean was never really present in the school curriculum, but that changed in 2020 when Melita Mokos*, marine biologist and ocean literacy advocate at the University of Zadar, entered Sandra's classroom as part of her ocean literacy outreach programme in kindergarten and primary schools. 'She was an inspiration,' Sandra says. 'Hearing her speak about so many marine issues I had never heard of before made me realise how little I, my colleagues, and our students really knew about the ocean in general and our own Adriatic Sea specifically. I felt I had to do something with this.' With Melita's help, Sandra got in touch with several associations supporting her and the rest of the school with scientific knowledge and biodiversity projects. Soon, a new Blue School was born.

### One species at a time

'We've been organising several projects for our children since 2021. Our focus has been on biodiversity in the Adriatic Sea, and each year, we choose a different Mediterranean species to learn about,' Sandra tells. So far, the children have done research on *Posidonia oceanica* (see box), sea sponges, and small pelagic fish such as sardines and anchovies. For each species, the school organises an outdoor activity for the 3rd and 4th grades (ages 8 – 10). This is then followed by several in-school activities involving the whole school from the 1st to the 8th grade.

### On scientific research and *Posidonia oceanica*

'We started the project on *Posidonia oceanica*. Melita and her colleague Ivana Zubak Čižmek took us to the beach, where they showed us a Posidonia plant. The children got to feel it, touch it, smell it. They put it under the microscope to investigate. And afterwards, they got asked all these questions about their 'mini-research'. This way, the children got to experience what it is to be a scientist and how to conduct their own investigation,' Sandra says.



### Sustainable harvesting at Kali and Krapanj

The following years, field trips to Kali and Krapanj were organised to learn more about small pelagic fish and sponges. 'The island of Krapanj is well known for sponge harvesting, which has been an important part of the local cultural heritage since the 17th century. On the island, we did a research activity on sponge species, visited the sponge museum, and interviewed a fisherman who still works there and dives for sponges,' Sandra explains. Visiting this place, the students not only learned about this local tradition and the diving technologies involved but also about the importance of sponges to the local ecosystem. 'Sustainable harvesting practices are indispensable,' Sandra mentions. 'Therefore, at Krapanj, our students learned that in contrast to modern bottom trawling, sustainable sponge harvesting only takes part of the sponge, allowing the sponge to regrow and that the harvesting is not practised all year through'.

Sustainable harvesting is also key for the fisheries in Kali, a village on Ugljan Island, which has a 300-year tradition of fishing for small pelagic fish. 'We went to a small fish processing factory, where the children learned about the processing of sardines and anchovies and were introduced to drying and salting techniques,' Sandra tells. 'We also visited the fishermen, who introduced the children to the profession and talked to them about sustainable fishing practices. Here, the children learned about the impact of different fishing techniques on the ecosystem and why there are limits to how much fish can be caught and when.'

> ***Hearing Melita talk about so many marine issues I never heard of before, made me realise how little I really knew about the ocean.***

Photographer and credits: David Baker (Unsplash)

Photographer and credits: Benjamin Jones (Unsplash)

### In-school activities

The knowledge gained from the 3rd and 4th grade field trips is then shared with the rest of the school and applied in various in-school activities. For example, during the months following the visit in Krapanj, the children at school created a board game with quiz-like questions on the information they learned during the field trips. They also created sponges out of clay and wrote informative brochures about the species. 'In the same way researchers write scientific articles, our children designed brochures in which they explained all about the different types of sponges, their life cycle, their importance to the ecosystem, and what is threatening them,' Sandra explains. The brochures and clay artwork were then presented in an exhibition at school and then later also at the local library. The school exhibition passed on knowledge of these local marine species to the parents. Through the library exhibition, the knowledge was spread to the larger community as well.

### Community involvement

To Sandra, community involvement is important. 'I value social skills a lot. For example, we apply a peer tutoring principle, in which we pair up older and younger children to help each other out during the in-school activities. We also work on inclusivity, as with the tactile picture books we designed for children with autism.' Since good educational material is often lacking for children with autism, Sandra was looking for ways to better help them. She discovered that some autistic children benefit from tactile educational materials. Therefore, with her students, she developed tactile picture books about ocean life and donated these to a local association working on autism, making ocean literacy more inclusive.

Three years into the Blue School experience, Sandra and her team now feel more knowledgeable, confident, and empowered to further adapt the existing materials and develop new ones.  Does Sandra have new plans for the future? 'Oh! Many, many plans!' she laughs passionately. For the Šimun Kožičić Benja Elementary School, the Blue School adventure has only just begun.

Click here:

Melita Mokos has been involved with EMSEA since 2015 and has played an important role in the EMSEA Mediterranean Group. Scan the QR-code to find out more about her, her role at EMSEA and her job at the University of Zadar.

## *Posidonia oceanica*

*Posidonia oceanica* is a type of seagrass that is endemic to the Mediterranean, meaning it grows only in this area. It forms large underwater meadows of great ecological importance. These seagrass meadows produce oxygen, sequester carbon, supply nutrients for the surrounding food web, are good indicators of seawater quality, stabilise sediments, and reduce coastal and beach erosion. They also provide food, shelter and spawning areas for many species. This is not only beneficial for local biodiversity but also supports the sustainability of fisheries.

Yet, despite these valuable functions, *Posidonia oceanica* is currently under high human-induced pressure in the Mediterranean Sea. This species is vulnerable to pollution and eutrophication, so boat anchoring, high turbidity, and sediment burial from coastal construction pose real threats. It's also threatened by the spread of invasive species, and entire meadows are often destroyed through bottom-trawling.

Teaching the local community about the benefits of and threats to *Posidonia* is therefore of the utmost importance to help protect and safeguard this unique species.

FRANCE

# Children Taking the Reins of Biodiversity Conservation

## *Les aires éducatives*: the project in which France puts children in charge of the environment

Across the country, over 1500 marine and terrestrial educational areas (*aires éducatives*) are being actively managed by primary and secondary school students in a project that wants to boost eco-citizenship and reconnect students with nature. Louise Bigot from the French Biodiversity Office explains how this initiative heightens knowledge and social skills through place-based education and outdoor experiences.

### How it all began

2012. In the Vaitahu primary school on the Marquesas Islands in French Polynesia, a girl listens to a scientist talking about the marine environment. Wanting to protect the marvels she hears about, she raises her hand. 'Can't we be in charge of protecting the bay in front of the school?' she wonders. It's the start of what is now an elaborate programme covering the whole of France and its overseas territories.

The French Polynesian concept of children managing a marine area slowly grew into something more structural, being adopted by the Ministries of Education, Environment, and Overseas Territories and the French Biodiversity Agency. In 2016, eight pilot projects were implemented to develop the methodological tools and pedagogical guide the current project is based on. Two years later, terrestrial areas were included in the project as well. 'We now have over 1500 educational areas in the network, of which almost 400 marine ones,' Louise Bigot says. 'The students involved range from 8 to 18 years old and come from various types of education systems, including vocational schools, secondary schools, and specialised institutions for children with disabilities. We want to include everyone.'

### Students at the heart of decision-making

The goal of the project is to educate students about eco-citizenship and help them reconnect with nature, working in collaboration with local stakeholders and adopting a pedagogical approach that differs from traditional teaching methods. 'An important aspect of the project is that the *aire éducative* is fully embedded in the school programme. The teachers don't just visit the area for a couple of biology classes. They use it to teach about the history of the region, to have the children write an essay about it, to do maths, to be an inspiration for art classes, … It's about a whole new way of teaching and it has a huge impact on class dynamics and student behaviour,' Louise explains. Adapting their teaching methods can be challenging at first, but once teachers become familiar with the concept, many involved in the project report that they wouldn't want to go back.

The participation of children at the centre of the decision-making process is crucial. One of the central methodologies is setting up a student council, in which the children take all the decisions regarding the *aire éducative*. 'First of all, they decide on the location of the area they want to manage,' Louise says. The level of biodiversity in the selected location is of little importance. From lagoons to mountain meadows, or from isolated marshes to heavily urbanised coastlines, each environment offers learning opportunities, whether about biodiversity or the impacts of human activity on that ecosystem. Once the location is chosen and inspected, the children decide what actions they will take based on the needs of the area and by listening to each other's opinions, respecting each other's ideas, collaborating, and voting as a democracy. 'They don't do this alone,' Louise adds. 'Their decisions need to be informed. They do this by consulting locals, experts, site managers and other stakeholders. Often an environmental education association is involved in the project. It really is an apprenticeship in democracy.'

### Growing knowledge

Actions can take different forms. The first category is growing knowledge. During the school year, the students decide what they want to learn more about through their *aire éducative*. 'Some students choose to learn more about plankton, for example,' says Louise. 'They can then take samples and study the changes in population over the course of a year, or they can implement a specific citizen science protocol and add their data to an international database.'

### Managing a site

The second category of actions involves managing the site. 'People often think managing implies active involvement, but most of the time, not interfering with nature is the best thing you can do to manage a site properly,' Louise stresses. 'However, sometimes there are interesting measures to take.' She refers to a project in La Réunion, where a group of children has planted shrubs to prevent beach erosion. 'In these cases, it's crucial not to start something without understanding how to do it properly. This school worked together with a local specialist to select endemic and native species that would support the local biodiversity.'

In another educational marine area, the students from a Breton maritime high school thought of a solution for the plastic pollution on the beach, partly caused by local fishermen

Photographer and credits: CPIE Flandre Maritime

who cut their nets and threw the scraps on deck to be washed away into the sea. The students created a special garbage bag for the fishermen to carry on their bodies while cutting the nets, preventing the plastic from ending up in the water and on the beach. 'It's a good example of how the project goes beyond the classroom, engaging students to get involved with the local community, economy, and stakeholders,' Louise says.

### Raising awareness

The third category involves taking actions to raise awareness. Some actions include creating a theatre play, a podcast, an exhibition, or a card game about beach species to play with friends and family. Other actions take it further and involve lobbying at the political level. 'We have students that wrote a letter to the mayor to address the plastic pollution on the local beach and the lack of garbage bins there,' Louise shares. Another school noticed that construction of a tourist pathway was threatening a habitat for protected species. They contacted the mayor to report the issue. As a result, the construction company adjusted their plans to preserve the habitat. In La Ciotat, in the south of France, some students even succeeded in creating a marine protected area, including a no-fishing zone, in La Calanque du Mugel, a local rocky sea inlet. These examples beautifully illustrate how the project not only affects the students but can also influence local policy.

Over the course of a year, these actions reconnect the children with their local environment, while also drawing their families into the process. 'Thanks to this emotional connection, we notice it's a way for children and their families to change their behaviour towards the local environment, to respect it more, and to treat it better,' Louise adds.

The *aires éducatives* team is now working on further expanding the project. 'The most enthusiastic and engaged teachers are the first and easiest to reach. The challenge now is to reach the ones that are less convinced of the benefits of place-based and outdoor education,' says Louise. 'Also, we're working to expand the project beyond France and are currently setting up marine educational areas in Australia, Spain, and the islands in the Indian Ocean as well.'

Photographer: Yann Souche
Credits: Yann Souche / Office français de la biodiversité




Photographer and credits: Alban Vasse

Credits: AME Simone Veil - La Rochelle

MALLORCA, SPAIN

# How a hundred Mallorcan Schools Joined the Blue School Network in Just One Year

## The *Som Escoles Blaves* project: a bottom-up success story

Goal: have one hundred Mallorcan schools join the Network of European Blue Schools in just one year. It seemed ambitious, but the Mallorcan company Sea Teach delivered. In 2023, their project We are Blue Schools (*Som Escoles Blaves*) even received a WestMED award, supported by the European Commission, for raising awareness of the blue economy in the western Mediterranean region.

What started in 1999 as a private company offering courses to tourists for recreational boat licenses has slowly grown into a social enterprise focused on improving blue education, empowering disadvantaged youth, and boosting the blue economy. ‚Fifteen years ago, we started taking on European projects,' says Silja Teege, managing director at Sea Teach. 'One project involved bringing unemployed young people into jobs in the blue economy. That brought us into contact with EMSEA, who are working on promoting ocean literacy across society. Their mission aligned perfectly with our vision, and I soon joined their board. Through EMSEA, I got in touch with the Blue School network, and it all sort of snowballed from there.'

### Top-down versus bottom-up

Silja would love to see ocean education incorporated into European school curricula, but she stresses the complexity of that goal. 'Currently, education is often not organised on a national level but on a regional level. At least, that is the case in Spain, Germany, Belgium, … And even though Europe is a union, all countries have their own culture and unicity. So, having one European school curriculum or even bringing blue subjects into national curricula is not so easy to implement, nor it's something to expect in the short term.' Therefore, Silja strongly believes in a bottom-up strategy to boost ocean education by approaching individual schools, listening to teachers' needs and barriers, supporting them in developing their programme, helping them with the Blue School application forms, and growing the network one by one.

'I'm not saying it's easy,' Silja stresses. 'It's a lot of hard work and there are a lot of barriers to cross.' One barrier in Mallorca was language, since schools in the Balearic Islands use Catalan rather than Spanish. That is where former employee Christian Esteva Burgos came in. 'With Christian having the Mallorcan culture at heart and speaking Catalan, we found an entrance. But that was just the first hurdle. After that, the real work began. Christian spent days and days on the phone, finding and convincing the people he needed. He did hours and hours of research. Eventually, his work started paying off. He attracted the first schools slowly at first, but momentum quickly grew.'

### Advantages of a bottom-up approach

Even though it's hard work in the beginning, a bottom-up approach has the great advantage of creating a project tailored to each school, in collaboration with local partners, and with respect for the school culture. 'Some people strongly believe in a top-down method. I think we need both. Many people in the field, such as teachers, see a top-down approach as an all-in-one format imposed from above, without any connection to teachers or the local culture,' says Silja. 'The bottom-up approach is all about collaborating with teachers and allowing them to play a central role. They feel heard, and this often leads to greater engagement and pride.'

That pride was well obvious in the two award ceremonies organised by *Som Escoles Blaves*, where the Blue School certificates were handed over to the schools by Evy Copejans, director of EMSEA. 'I was afraid most teachers wouldn't come for 'just a piece of paper', but they were all there, proud of being part of a European network and of the genuine recognition gained for their hard work,' Silja recalls smiling. 'I think, maybe, that was the moment for many teachers to realise they were doing something great and were part of something bigger.'

Photographer and credits: Sea Teach


Photographer and credits: Sea Teach

Photographer and credits: Sea Teach

### Expanding the network across Mallorca

With more and more schools certified and active in blue education, over time, the word spread and other schools began to approach Sea Teach themselves. An important factor in spreading the message was the project's presence in the local media. 'Christian participated in several radio and television programmes. He managed to get a regular spot on a local radio show for school children from the Blue School Network. Every Friday for half an hour, school children would come on the show and talk about the activities they did with their school, such as beach clean-ups or studying ocean currents using buoys. It really was a platform for the children, and very inspiring for other schools as well,' Silja says.

Apart from schools, other organisations also began approaching Sea Teach and the *Som Escoles Blaves* team, such as hotels that wanted to offer activities to children visiting Mallorca during the summer holidays. 'We feel the blue wave further expanding across the island, impacting more people than just the school children. There is rising attention for ocean literacy and activities involving the environment and biodiversity. Through these hotels, for example, now tourists too can book ocean-awareness sessions that we organise for their children,' Silja explains.

### From Mallorca to the mainland

With the Mallorcan project being so successful, Silja is now looking across the sea to mainland Spain. 'We're building a Blue School cluster with other organisations, such as NGOs, universities and national research centres. We would like to expand our network, cover more regions and reach inland schools as well.' As part of this mission, Silja's team is currently working on a twinning project, pairing Mallorcan Blue Schools with inland schools near Madrid. Silja explains how that works: 'When the students from the Blue School here in Mallorca go monitoring on the beach, they transfer their findings to the students on the mainland. They can then use these data for learning more about biodiversity, beach ecology, salinity and such. So far, we have eight schools involved in this pilot project, but we've received some great feedback. The goal will probably be to expand this twinning project further, because it's a good way of connecting inland students with the ocean more directly.'

Sea Teach is also involving university students who are learning to become teachers, with the aim that they will become future advocates of blue education.

### Sponsorship

Even though Sea Teach is expanding the project to mainland Spain, Silja realises the Mallorcan project hasn't finished yet. 'Officially, the project is finalised, and so is the funding, but it doesn't stop here. New schools can still contact us and we need to make sure the ongoing projects continue in the future. It's not a project with a beginning and an end. You need to keep it going. Unfortunately, you can't do that on passion alone. We need to get sponsors involved,' Silja says.

'Sponsorship benefits not only this initiative but also the sponsors themselves in the long run. After all, businesses in the blue economy can only benefit from future employees that are ocean aware,' Silja states. 'Besides, the ocean connects us all, and so does the responsibility to protect it. By nurturing this initiative, people can invest in a shared and sustainable future.'

One year after the original We are Blue Schools/*Som Escoles Blaves* project, Sea Teach continues to advance its mission of blue education, looking for partners and further expanding the network.

Photographer and credits: Sea Teach


Photographer and credits: Sea Teach

STRÖMSTAD, SWEDEN

# ‘Never Thought Sea Squirt Could Be So Tasty’

## How the Swedish Strömstad Gymnasium brings seafood closer to their students

Situated on the west coast of Sweden, Strömstad is a small town of about 14.000 inhabitants. Being close to Sweden’s only marine national park, Kosterhavet, and Göteborg University’s internationally renowned marine research lab, Tjärnö, Strömstad Gymnasium had all the ingredients it needed to make its students more ocean literate. Therefore, for three consecutive years, they have taken their students to the ocean on an annual theme day. With their advanced experience, they have now gained the title of Ultramarine Blue School – a title they’re quite proud of.

### The ocean: not for natural science students only

Strömstad Gymnasium harbours over four hundred students aged 16 to 19, following both vocational and university preparation programmes, with study courses ranging from hospitality, construction, sales, energy, and health to social and natural sciences. ‘Often people think ocean education is for natural science students only, because of the biology of fish or the ecology of a seashore. But the ocean is a broad theme involving all aspects of society,’ say Anja Sonerud, project manager at the Department of Education of Strömstad Municipality, and Anette Ungfors, Strömstad Gymnasium biology and natural science teacher with a PhD in Marine Ecology.

This is illustrated vividly by the many connections the school has with external partners: museums, research facilities, and nature reserves, as well as a local hotel, fish stores, fishermen, and a rescue organisation. ‘Our whole society is connected with the ocean somehow. And yet, that connection is surprisingly fragile,’ Anja says. ‘One might assume that students in a coastal community would be well-acquainted with the ocean, but that is not always the case. Before we launched our Blue School project, there were students who had never visited the Koster islands, hadn’t been to the sea during the entire summer break, or had never set foot on a boat.’

### Annual theme day

Since Strömstad Gymnasium became a Blue School, a new world has opened up for its students. Every year, the school now organises a theme day, Life at Sea, giving students the chance to engage with the ocean from different perspectives through activities at three off-campus locations. In 2024, the school focused on sustainable seafood and organised twenty different workshops for all 420 students in just one day.

‘It’s not just on the annual theme day that we work on marine themes,’ Anette stresses. ‘The students also need to write a lab report. Weeks ahead, we start preparing them by letting them write the background and methodology of the research they will be doing on the theme day. Then afterwards, they spend several weeks writing up the results and discussion of the data they’ve gathered. But the theme day is central to the project.’

### From awe and fascination to storm kitchen cooking on the beach

On the annual theme day, each grade has a specific program at a specific location. The 16-year-olds go to Nötholmen nature reserve near Strömstad town. In 2024, they were introduced to marine ecology and scientific methodology in three different workshops involving invasive species, water sampling, and species inventory. It seemed a success, since at one point, some students didn’t want to leave the water. ‘There were three students in waders. They were from the economics study programme, so biology and ecology are not fields they have a lot of experience with. But here, in their waders mid-waist deep in the sea, they were looking through these aquascopes (a cone-shaped device that allows underwater viewings) and constantly finding new creatures and organisms they’d never seen before. They were absolutely fascinated and mesmerised. Guided by Christin Apelqvist from the marine research lab Tjärnö and Sara, a natural science teacher at Strömstad gymnasium, the students kept asking about everything they saw. And when it was time to move on to the next workshop, they practically seemed glued to the sea floor,’ Anja laughs. The anecdote goes to show how creating an ocean connection not only comes from knowledge, but from awe as well.

Since the year’s theme was seafood, the students all got together on the beach and gathered around a storm kitchen. Here, Anne Hamnebo, from the seafood promoting organisation Sjömatsfrämjandet, fileted fish and explained how fish reached the plate. The students then got their hands dirty themselves and prepared their own seafood on the camping


Photographer and credits: Strömstad Gymnasium


Photographer and credits: Strömstad Gymnasium

stoves. ‘You expect some students to turn their nose up, but actually, they were all quite excited to be cooking themselves. It was lovely to see how they were cooperating, exploring flavours they’ve never tasted before, laughing, and feeling proud,’ Anja reminisces.

## From sea to plate

The 17-year-olds go to Kosterhavet, Sweden’s only marine national park. In 2024, the programme focused on sustainable and blue businesses. ‘If you ask students how fish is caught, many of them think of fishing rods. That’s great for small scale fishing, but not really how commercial fishing works,’ Anette laughs. During the workshops, the students learned more about the fishing industry, for example, by visiting a shrimp fishing boat where a local fisherman talked about the many different ways you can fish, the impact on the ecosystem, and the various types of seafood. ‘Hearing a 22-year-old fisherman, not much older than themselves, talk ever so passionately about his job, definitely was something to remember.’

The students were also quite surprised to learn that fishing was allowed in the marine national park. ‘People often think fisheries are destructive and that the sector can’t be combined with nature conservation. However, if you fish in a sustainable way, that combination works perfectly,’ Anette explains.

Apart from fishing, the students learned about other ways of growing food they didn’t know that well, such as seaweed aquaculture. ‘Algae are quite unknown to most students,’ says Anette. ‘The algae workshop gave them another perspective on seafood.’

## Great efforts, great rewards

For the 18-year-olds, the 2024 programme was the most elaborate, focusing on professions and entrepreneurship. This included a visit to a local fish store, learning about Strömstad’s marine history, an ocean-related art-walk, a blue mussel cooking workshop, a visit to the Sea Rescue Society, and many more. ‘We went a bit overboard’, Anette and Anja mention with a smile. ‘It was a huge effort making all this happen. We had so many different workshops with so many different partners. But it was worth it. The variety of the workshops truly reflected the variety of topics involving the sea. We really wanted the students to see which opportunities the sea has to offer, especially in terms of jobs. They can become a marine researcher, geographer, artist, fisherman, cook, salesperson, or go work in conservation management, hospitality, or tourism. Many students don’t know what the possibilities are, but through these workshops, a whole new world of opportunities had opened up for them.’

## Seafood menu

No doubt, the icing on the cake in this year’s Life at Sea event was the accompanying seafood menu. ‘In 2023, lunch included a chicken salad,’ Anette laughs. ‘This time, we really wanted to do something more, especially since in the 2023 evaluation, students themselves indicated their curiosity about seafood.’ With the ProBleu funding and the help of several local producers and chefs, the kitchen staff succeeded in presenting a multiple-course Flavours of the Sea menu to all the students. ‘We bought this huge wok for the kitchen staff to make a stir-fry with seaweed, sea squirt, and mussels. They also served fluffy buns with seaweed in it. It was delicious,’ Anja says. ‘And the dessert was a lovely chocolate brownie with seaweed cream, made by David Vidal, the dessert chef from the local hotel Scandic Laholmen.’ Both Anette’s and Anja’s eyes sparkle as if the brownie were still in their mouths.

‘Actually, we have an interesting story on that,’ they add. ‘The seaweed from both the bread and the brownie cream came from an algae buoy in the sea not so far from here. The buoys are a project from Nordic SeaFarm, a seaweed farm nearby. They allow individuals and organisations to purchase their own buoy for their own use. The hotel restaurant has one, and so do we, as a school. We’ve visited the algae farm twice already with some of the students. It’s quite spectacular. And it was lovely to have our own grown algae on the plate that day’.

## To growth and community recognition

In the past three years, both Anette and Anja have put a lot of time and effort into the project, but it’s now getting to a point where they can truly reap the fruits of their labour. ‘Now, the structure is there, and we have an extensive network – which we are so grateful for. So, each year will be easier to organise. Also, we are looking forward to expanding our network to other Blue Schools to share thoughts, experience, and to inspire each other.’

In the meantime, their efforts have not been in vain. The Strömstad municipality picked up on their project and the school will be featured in the local magazine Allihopa, to be distributed to all households. Maybe this way, the school can expand their blue love even further.

Photographer and credits: Strömstad Gymnasium

DEN HELDER, THE NETHERLANDS

# From Blue School to Blue School Municipality

## How a Dutch town embraced the Blue School concept

A cold November wind blows across the north-western tip of The Netherlands. Here, at the start of the Wadden Islands, lies Den Helder. Rough weather is coming, so the harbour is filled with ships of mind-blowing dimensions, coming in for shelter and maintenance. Den Helder is home to the navy as well as a range of offshore industries, explaining the size of these vessels. The ocean is definitely at the heart of this town. No wonder it harbours five Blue Schools already.

### Europe's very first Blue School

In 2021, the primary school Jac. P. Thijsse-school was the first to obtain a Blue School certificate in Europe. Rachel Kraak, a teacher at the school, waves away the honour. 'I'm the daughter of a fisherman,' Rachel says. 'Many of my colleagues and the children here at school have family members in the blue economy as well. In this environment, teaching about the sea came naturally to us. We've been a Blue School long before the concept was born. For years, our school profile has been Sportive and Maritime. In that context, we've been working with the navy, for example, to organise navy-related sports activities for our children. Once the European Commission launched the Blue Schools Project, it was only natural for us to apply and make it all official.'

Even though the Jac. P. Thijsseschool was a Blue School at heart already, getting the certificate led to a more embedded approach. 'Before, our classes and teachers worked more separately. Becoming a Blue School brought us more together. Now, months in advance, we sit together and brainstorm on how to approach the next theme.'

Each year, the school works on one of the five Blue School themes: Ocean and Climate, Biodiversity, Clean & Healthy Ocean, Maritime Culture, and Food from the Ocean. The themes rotate each year. Some activities are done within the individual class, while for other activities, multiple classes are combined. Sometimes even the whole school is involved — for example, during the annual theme show, to which neighbours and parents are also invited. 'There is so much more connection between the teachers now,' Rachel says. 'And we're working on spreading that connection beyond the school as well.'

### The Jac. P. Thijsseschool: a spark for inspiration

Since 2021, the Blue School connection has indeed extended further. One year after the Jac. P. Thijsseschool, the secondary school Scholen aan Zee joined the network. 'We are the only ones offering secondary education in Den Helder, including both a gymnasium and practice-oriented education for children aged 12 to 18,' says Hans van Beekum, director at Scholen aan Zee. 'Even though we're surrounded by the sea and our school name has the word 'sea' in it, the ocean wasn't prominently present in our school identity. So, when the Jac. P. Thijsse-school became a Blue School, that triggered something for us.'

The school team reviewed the curriculum, looking at what was already present and what was still missing. 'We found we were actually doing a lot already,' says Madelon van Schoonhoven, educator at Scholen aan Zee. 'We started mapping out everything we did and thought about what could be strengthened, for example, by building it structurally into the curriculum. We also thought about what was still missing and which opportunities we had not yet seized. It's an ongoing process, but we've come a long way already.'

### Project work and curriculum adaptations

There are some big projects, such as an annual solar boat race or the 2021 sailing competition Race for the Future, in which the students developed skills they could never have learnt in the classroom. 'First of all, that was an expensive project,' says Remco Schaap, educator and project manager at Scholen aan Zee.

Photographer and credits: Scholen Aan Zee


Photographer and credits: VONK

'Participating in the sailing competition cost €30.000, and the students were responsible for raising that money themselves. Apart from sailing, they learned to approach sponsors in a professional way, present their project effectively, and collaborate with others. They also had to cook for a large group and face the sometimes-harsh weather conditions at sea. Through this experience, they developed organisational skills, economic insights, and a strong sense of community. It gave them a boost of confidence and an opportunity to be proud of themselves – especially since these are often kids who don't always get a lot of opportunities in life.' (More information on the sailing project can be found via the QR code below this article.)

Apart from these projects, the school pays attention to structurally embedding the ocean in the curriculum. For example, in Dutch class, the students write poetry about the ocean, and in English class, they read books about the sea.

'Sometimes it doesn't need to be that hard,' says Madelon. 'It can be about very simple but thought-through adjustments in the program.' She points to the school restaurant kitchen, where the hospitality students are doing the dishes. The kitchen is part of the profession-oriented education at Scholen aan Zee. 'We've been thinking about how to add the ocean theme to our kitchen. Salination (see box) is an ongoing problem in this region, so – in the face of climate change – currently, we're investigating the possibility of working with saline agriculture, for example.'

Supported by Madelon, all the other profession-oriented departments also look for ways to embed the ocean into their curricula. The healthcare students are made aware of the beneficial effects of the sea on human physical and mental health and are motivated to think about the impact of microplastic-containing cosmetics. The sports students get involved with beach and sea sports. 'I think it's important to approach the Blue School concept as holistically as possible,' Madelon says. 'Everything is connected. It's important to teach that to our students. To put students from different study programs together and to make them realise that they all learned about the sea in a completely different context. To make them see that the ocean is something that binds them as a community.'

Photographer and credits: VONK

### From school to community

Tanja Koopman and Henriëtte Weerstand-Slot from VONK agree. VONK is a vocational school for students aged 16 to 20. They joined the network in 2023. 'The Blue School project has been transformative in so many ways. First of all, we have a much better cooperation between the schools, ensuring we now have a continuous learning pathway from primary all the way to secondary school. We didn't have that before. There was hardly any communication between the separate schools. The Blue School project has really resulted in a unifying collaboration between the schools, for example, by working on the same Blue School theme with all schools every year,' Tanja says.

'But the connection doesn't stop there,' she continues. 'For the future, we're looking further. We truly want to make that connection with the wider society. For example, our wish is to work closer together with entrepreneurs and companies in Den Helder. We want to listen to their needs and see how we can contribute to that as a school,' Tanja explains. As an example, she refers to the first project VONK applied with for the Blue School certificate. 'In 2021, the EU banned pulse fishing. The fisheries department in our school then looked at other possibilities that were not ecologically damaging but still allowed fishing, for example, by using soundwaves.' This project could benefit the fisheries sector in Den Helder. It is this kind of cooperation Tanja is looking for. 'And in the long run, it's not just us going to the entrepreneurs. We also want them to come to us and make use of the potential our students offer, for example, through internships and possibly future jobs. With the Blue Schools project, we aim to bring our whole community closer together,' Tanja says.

Photographer and credits: Scholen Aan Zee

Photographer and credits: Scholen Aan Zee


Illustrator: Monique Dozy
Credits: VONK

### From Blue School to Blue School Municipality

Another way of making connections beyond the schools is through the Blue School Subscription, an agreement with four cultural and nature-oriented organisations that offer special fees or free admission to Blue Schools. For now, these are Marinemuseum (The Navy Museum), Nationaal Reddingsmuseum (The National Rescue Museum), De Helderse Vallei (The Helderse Valley), and Fort Kijkduin, but the schools are looking to expand that network even further. The next step is to involve these organisations even more actively, having them organise joint programmes in line with the Blue School annual projects.

The project is definitely spreading throughout town, especially since two more primary schools became Blue Schools in 2024. Rob van der Sande, strategic advisor for the municipality of Den Helder, couldn't be happier. He would love to see all Den Helder schools join the network and for the Blue School mentality to spread further across town. As a true 'Blue School Municipality', he envisions a thriving future for Den Helder, further connecting different partners from diverse backgrounds.

### Spreading the Den Helder vibe

He's also quite enthusiastic about bringing the Blue School vibe even beyond Den Helder. Each year since 2023, the municipality of Den Helder and the Blue Schools organise a National Blue School congress to inspire other teachers in The Netherlands to take part in the project and become a Blue School themselves. For this event, they are supported by the European Commission (DG Mare) and the EU4Ocean partner EMSEA. 'It's not our ambition to convert all Dutch schools to Blue Schools, but we do find it important to share what we're doing here and hopefully inspire others in the process,' says Hans van Beekum (Scholen aan Zee). Currently, the focus is still regional, but all partners hope to aim for a national audience in the long run. Rob van der Sande (municipality Den Helder) confirms this ambition: 'So far, we've kept it rather small, but for the upcoming years we're looking for bigger venues, a more professional organisation, and upscaling the communication about the event. And who knows, maybe not only schools are inspired to go blue, but other municipalities as well.' Staying in the sea theme, it's fair to say the world is their oyster. 'A lot already happens in Den Helder regarding blue projects, but it's not always known on a national, regional, or even local level,' says Rob. 'The Blue Schools initiative is a chance to structurally embed attention and respect for the ocean in our education, but also – in the long run – in our economy and municipality.' Rob also sees the Blue School Municipality concept as an opportunity to attract more families to the region and counteract the population decline the region has encountered in the past years. 'Recently, there's been a pull towards the cities. People hope for brighter futures there. But life in Den Helder is lovely. Streets are safe for children to go to school, we have a loving community, and there are so many positive things going on here. The Blue School project has been a chance to really put that in the spotlight,' Rob concludes.

Click here:

* More information on the sailing project



## Salination

Salination is the process of soil accumulating salts. This can result from both natural or human-induced causes such as saline water irrigation, droughts, or – in the case of Den Helder – rising sea levels and the decrease of the underground freshwater supply. Climate mitigation and water use strategies might help avoid the most dramatic scenarios in the future, but adaptation to this new reality is unavoidable. The Koegraspolder for example, an agricultural region in the south of Den Helder, is already falling victim to salination, which is bad news for the many agricultural companies there that grow flower bulbs.

One way of adapting is adjusting local agriculture. The famous Dutch flower bulbs might not grow well in these saline environments, but other crops thrive. Farmers will probably need to switch to salt-tolerant crops in the future. Teaching their hospitality students how to cook with products from saline agriculture is one way Scholen aan Zee is preparing them for a changing coastal environment.

# Partners in Learning

*When three persons work together, each can be the teacher in some aspects.*

**Confucius**

While schools take center stage in the **Network of European Blue Schools**, no project happens - or should happen - in isolation. For ocean literacy to have lasting relevance in today's society, it must be rooted in collaboration, connection, and community.

In fact, every successful Blue School project has been supported in some way by a partnership - whether with local NGOs, universities, businesses, or cultural institutions. These collaborations bring fresh expertise, resources, and real - world relevance into the classroom, while offering partners a chance to engage meaningfully with the next generation.

This chapter explores three different perspectives: an NGO, a university, and a local business. Each one offers a unique example of how working with schools not only supports ocean literacy, but also generates shared value and mutual growth.

TUSCAN ARCHIPELAGO, ITALY

# Stories on the Shore

## Why an island foundation believes working with schools is key to protecting the sea

On Elba Island, the sea is more than scenery. For those of us born and raised on an island, the sea is the natural element that surrounds and embraces us – something we've grown up with. For us, the sea is not just a natural environment to protect, but an identity, a culture, and a daily presence. That deep-rooted connection is exactly what inspired Fondazione Acqua dell'Elba to bring ocean literacy to the heart of the community – starting with its youngest citizens. We work every day to promote sustainability, culture, and the well-being of our community. Ocean literacy was just a natural step for us.

The turning point came in 2022 during the fourth edition of SEIF, Sea Essence International Festival, the annual event we created to celebrate all forms of maritime culture – environmental, economic, social, and cultural. There, a meeting with IOC-UNESCO's Francesca Santoro, Ocean Literacy Officer at IOC-UNESCO, laid the groundwork for collaborating with local schools. Her passion and ability to explain and convey the importance of ocean education made us realize it had to become a priority. From that moment on, we committed ourselves to transforming the Tuscan Archipelago into a true "Blue Schools" territory.

By 2024, all schools on Elba Island had joined the network. A year later, the initiative expanded to Giglio and Capraia, connecting the entire archipelago through shared learning about the sea.

### A ripple becomes a wave

This collaboration has had a significant impact on our Foundation. Enabling us to connect more deeply with younger generations and support teachers who bring marine education into their classrooms with passion and creativity. It has also increased the visibility of our sustainability commitments, involved our team in meaningful projects, and strengthened the bond between our foundation, our company, schools, and the community.

One of the most meaningful outcomes has been seeing girls and boys become true ambassadors of the sea – bringing home new knowledge, raising awareness among their families, and making the sea a daily topic of conversation. One project that contributed to this transformation – and that we feel particularly connected to – is the book *Storie in battigia* ("Stories on the Shore"), written during the 2024–2025 school year by the pupils of the primary schools of Marciana Marina and Marina di Campo. The stories are inspired by objects found on the beach, carefully observed and transformed into characters, legends, and imaginative visions of the sea and the world. This collective narrative, developed through the educational method of Daniela Mangini and Alfredo Gioventù, allowed students to turn observation into imagination –and imagination into a connection with the sea.

### Looking ahead

For the Fondazione Acqua dell'Elba, the journey with Blue Schools is far from over. If anything, it's just begun.

Looking ahead, we aim to deepen this commitment even further: by developing new educational materials together with schools, using art and storytelling as learning tools, and pursuing the dream – perhaps one day achievable – of turning all schools on Italy's minor islands into Blue Schools.

We firmly believe that businesses and organizations should embrace the opportunity to work with schools – not just for the visibility or reputation it brings, but because it creates shared, long-lasting value.


Photographer and credits: Pablo Massa

SANTA CRUZ DE TENERIFE,
CANARY ISLANDS

# From Tires to Transformation

## How a Canary Islands School of Architecture proves that science + Blue Schools = real change

On the surface, marine litter and architecture might seem like distant disciplines. But at the School of Architecture of the European University of the Canary Islands, researchers have been leading research projects that explore the intersection between marine debris and urban and territorial systems. Our engagement with the Network of European Blue Schools stems from a shared commitment to environmental awareness, ocean literacy, and the democratization of scientific knowledge.

Our journey into ocean literacy began with **RESLESS**, which was awarded a prize by the Santander Foundation. But it was **TIREOUT** — a project focused on mapping the spatial and ecological impacts of abandoned tires on the seafloor, one of the most problematic marine litter — that pushed the boundaries of both environmental research and public engagement.

### Turning pollution into participation

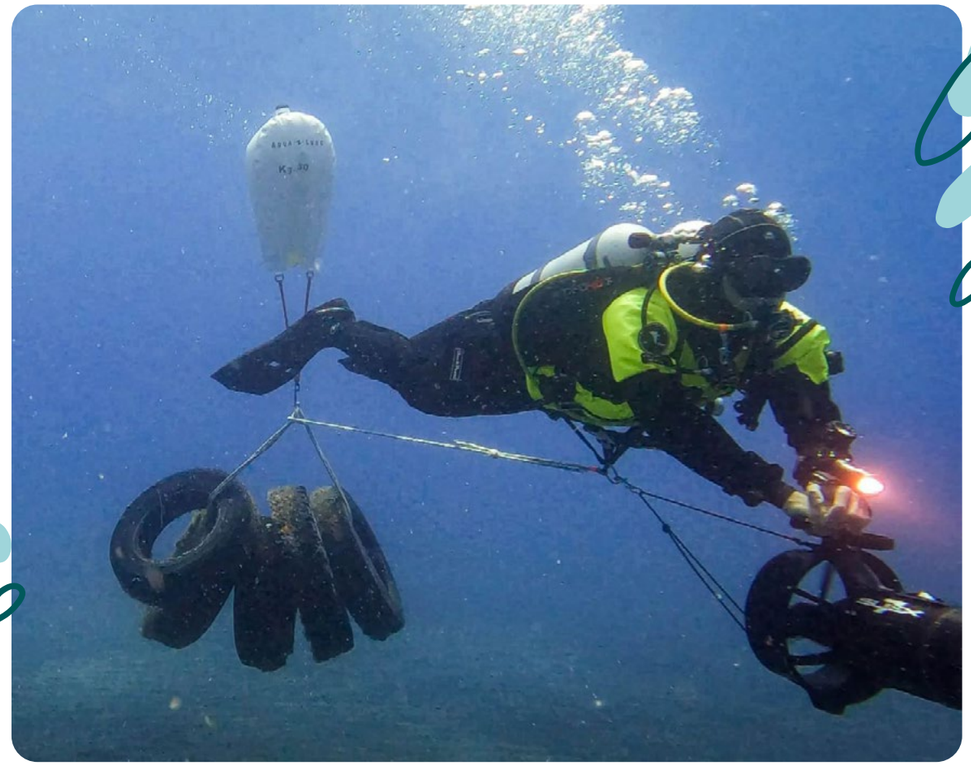
The recurring recovery of large quantities of marine tires during fieldwork highlighted the need to explore sustainable pathways for reuse. This insight led to the expansion of Tireout into a citizen science framework that involved school students in developing reuse strategies for these materials. Through hands-on workshops and collaborative research activities, students were not only exposed to environmental challenges but also introduced to the scientific process and the principles of circular economy.

This partnership has had a notable impact on our institution. Opening our research to younger audiences has enriched scientific dialogue and fostered community-based innovation. From an operational standpoint, the removal of tires contributes to reducing the environmental load and logistical challenges of waste management facilities. At the same time, students gain practical exposure to environmental technologies and marine sciences.

### A call to others

We strongly advocate for this type of cross-sectoral collaboration. Engaging students in real-world scientific challenges builds environmental responsibility, critical thinking, and systems understanding. Our future plans include broadening the scope of Tireout to encompass other types of marine waste and investigating alternative reuse applications through design-led research. By integrating academic inquiry with educational outreach, we aim to cultivate a new generation of ocean-conscious citizens and researchers.

Photographer and credits: Juan Diego López-Arquillo



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MALLORCA, SPAIN

# From Local Waters to National Change

## How small businesses and an NGO teamed up to bring ocean literacy into the heart of Spanish schools

At Sea Teach, we began as a small training centre for recreational boaters here on Mallorca. But over time, our work naturally expanded into something much bigger: blue education. What started as boating instruction slowly evolved into a broader mission – one focused on ocean awareness, sustainability, and empowering the next generation to care for the sea.

Since 2011, we've been involved in a wide range of educational activities, from training maritime professionals to engaging youth through school partnerships. We've always believed that fostering ocean literacy is essential, and in many ways, working with schools on the island was a natural next step.

We also founded **Clean Boating**, an NGO with the same mission approached from a different angle – raising awareness about plastic pollution and inspiring young people to take environmental action.

In 2020, when we first connected with EMSEA and the broader European context of ocean literacy, we quickly discovered how aligned our goals were. Shortly after, we became closely involved with the early development of the Network of European Blue Schools (NEBS).

### A Bottom-Up Approach

This led to the idea of starting a pilot project in Mallorca, using a "bottom-up" approach to bring 100 schools from Mallorca into the Network of European Blue Schools within a single school year.

We launched the pilot project in 2023, built on local language, local knowledge, and local trust. With strong support from the NEBS Secretariat and EMSEA, we were able to meet that ambitious goal of 100 schools. More importantly, this pilot case now serves as an example for other countries of how to approach schools with the idea of becoming a Blue School.

Clean Boating's role was crucial. They worked hand in hand with schools, not only guiding them towards Blue School certification but also helping those already in the network to elevate their projects. They organised clean-ups, creative workshops, school presentations, and community awareness campaigns. These activities went beyond simply cleaning beaches – they strengthened connections between students, teachers, and their local environment.

Since then, Blue Schools have taken root here on the island. Their impact has reached far beyond the classroom, capturing the attention of regional politicians, NGOs, marinas, and even hotel chains. For us at Sea Teach, it has opened up new partnerships, expanded our visibility, and shown just how much value lies in working with schools.

### Impact That Reaches Beyond the Shore

The results were immediate and visible. Students became more aware of the issues facing the sea and more confident in speaking about solutions, - whether through interviews, art projects, or community events.

For Sea Teach, the success of this initiative inspired the creation of the **Blue Schools Cluster**, an organization now leading the expansion of the network across Spain. The goal: bring all 17 provinces - coastal and inland - into the Blue Schools movement.

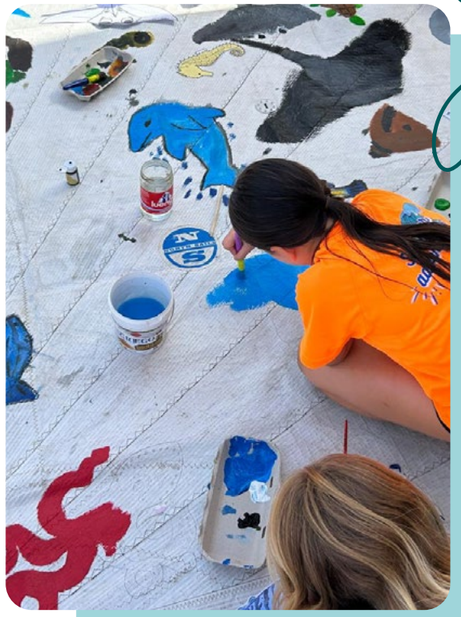
For Clean Boating, the partnership created new opportunities to experiment with **Blue Education approaches**, including beach monitoring, biodiversity surveys, water quality testing, and plastic analysis with local schools. They're now expanding their work to hotels and the tourism sector, engaging visitors and pleasure boat owners in ocean literacy.

What began as a small idea on an island is now becoming a national strategy, and as an Small and Medium-sized Enterprise, we're proud to be part of it. Working with schools hasn't just helped us grow – it's helped us give back. That's the kind of impact we believe every business should aim for.

### A Model for Others

Today, Blue Schools are well established in Mallorca, and their influence is expanding across the country. What began as a partnership between a small business and an NGO has grown into a model for how local collaborations can drive large-scale change.

For both of us, working with schools hasn't only advanced our missions, but has also – built lasting relationships, sparked new projects, and strengthened our community.



Photographer and credits: SeaTeach and Clean Boating

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