



Activity Report **THE SEACLEANERS** **2021**



The
SEACLEANERS



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TAKING ACTION FOR A POLLUTION-FREE OCEAN

2021 HAS ESTABLISHED OUR POSITION AS A COMPLETE PLAYER IN PLASTIC POLLUTION CONTROL

The year 2021 has been a busy one for The SeaCleaners. We have continued to deploy on new fronts in order to provide answer to one single question: *"Where should we focus our efforts to fight plastic pollution most effectively?"* To achieve this strong ambition, our response has been multiple.

First, the **MANTA**. The technological progress made this year represented a huge leap forward to make this giant of the seas, the only one of its kind, the most complete pollution control tool available.



Then there was the launch of the **MOBULA 8**, our multi-purpose bespoke cleanup vessel for inland calm and protected waters. It acts upstream of ocean pollution, as close as possible to the sources of waste, and is capable of cleaning up to 18,000 sqm and nearly 6 tons of waste per year.



Also, we achieved recognition as a major player in **public awareness**, through a massive digital deployment, the creation and distribution of new tools.

- We take pride in the **creation of our new Operational hub**, to implement adapted field actions in the areas of the world most impacted by the scourge of plastic pollution, in partnership with local actors, and to fulfill our mission of international solidarity.
- We implemented the **decentralization of our volunteer actions**, with the structuring of regional delegations to act as close as possible to the needs of the territories. This move has allowed us to multiply the actions carried out, from 20 actions in 2018, to 240 three years later.
- **Increased involvement in debates at the international level**, from COP26 to the IUCN World Congress and the One Ocean Summit was also on our roadmap, to influence political decisions aimed at fighting more energetically against ocean plastic pollution.
- With the support of our partners, The SeaCleaners has undergone an incredible transformation in recent months. **Our missions have expanded and our ambition has grown:** to have a visible positive impact on protecting the oceans, restoring them and repairing the damage of the past. The task is immense but our mobilization is stronger than ever, stimulated by these positive perspectives. 2021 has been a very active year for The SeaCleaners and has allowed us to consolidate our position as a complete and recognized player in the field of plastic decontamination.

TAKING ACTION FOR A POLLUTION-FREE OCEAN

IT IS URGENT TO TAKE ACTION

In 2021, the situation has not improved

The United Nations Environment Programme published in December a comprehensive review of plastic pollution and marine litter entitled *"From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution"*.

This study provides a comprehensive update of current data and research, identifies gaps in knowledge, and concludes with a recommendation for global strategies to combat plastic pollution. This is an extremely important study, which the United Nations Assembly will use as a basis for adopting its priority actions for the environment in 2022.

The finding is clear: plastic is everywhere. In 2019, its production continued to grow to 368 million tons, equivalent to the weight of Humanity.

Without urgent action, the 11 million tons of plastic that currently enter the ocean each year will triple in the next twenty years. Between 23 and 37 million tons of plastic would enter the ocean each year by 2040.

This is equivalent to 50 kilograms of plastic per meter of coastline worldwide.



Plastic, the big winner of the pandemic

The numbers give some indication of the magnitude of the problem. A study conducted by a Chinese-American team attempted to put a figure on the plastic pollution associated with the pandemic. On a global scale, 8.4 million tons of additional plastic waste would have been generated by the fight against Covid-19. The medical industry would be responsible for 75% of this increase. What about the remaining quarter?

Quarantine measures imposed around the world have also led to a significant increase in plastic waste. Online shopping has exploded and the use of plastic packaging has de facto followed.

Our eating habits have also changed in the space of 24 months. Delivery has become a common practice. In Thailand, for example, in the first half of 2020, the amount of plastic waste generated increased from 1,500 tons to 6,300 tons per day, largely due to the tripling of food deliveries in the country.

While prevention is at an all-time high and governments have finally begun to regulate the production and distribution of single-use plastics, the Covid-19-driven plastic boom seems like a huge step backwards. This alarming fact pushes us all the more to action, and this in all its forms..

THE ASSOCIATION IN 2021

Because the ocean is a common good for all of us, it is our collective responsibility to preserve it. Through a pioneering approach using cutting-edge technologies and innovative depollution and recovery solutions, The SeaCleaners acts with the conviction that only a concrete and comprehensive global approach to plastic pollution, both corrective and preventive, will allow for an awakening of awareness and a radical change in usage.

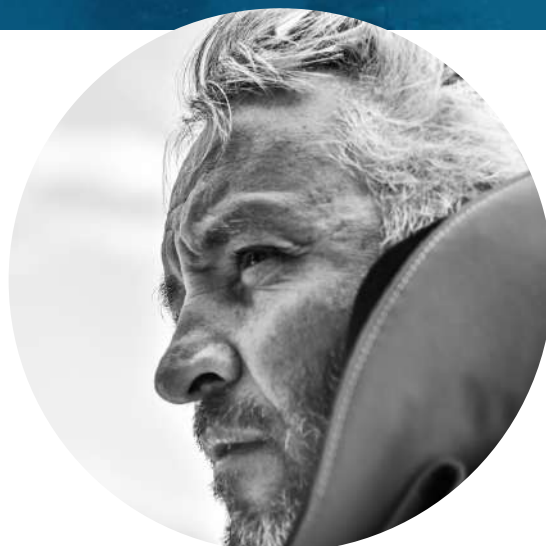


OUR DREAM

The dream of The SeaCleaners is that of a world in which the oceans, drastically depolluted, will have regained their original beauty and the integrity of their functions, which are essential to the good balance of the planet. Humanity and biodiversity depend on it.

WHO ARE WE?

The SeaCleaners is an association under the French Law of 1901, recognized as being of general interest, non-profit and exclusively privately funded. It was created in 2016 by the skipper Yvan Bourgnon, a French-Swiss sailor.



THE ASSOCIATION IN 2021

A team of passionate people

Over the past five years, The SeaCleaners crew has continued to grow and structure itself to gain expertise. The seven hubs that make up the association all bring passion, commitment and a determination to act to the global project.



Our missions

The SeaCleaners has chosen a proactive and pragmatic approach, focused on action and doing, consisting of "demonstrating to convince and multiplying actions on a large scale".

- 1/** By helping to clean up the oceans and aquatic environments and by repurposing plastic waste.
- 2/** By understanding plastic pollution, while developing and widely disseminating scientific knowledge.
- 3/** By raising awareness and mobilizing all audiences to change behavior and mentality in a sustainable way.
- 4/** By ensuring optimal management of ocean waste and by promoting local circular economy dynamics.

Our values

The SeaCleaners has chosen a holistic approach to make a difference. Through this approach, The SeaCleaners acts in accordance with four values:

- Caring and inclusive responsibility.
- Unwavering determination.
- Innovative and responsible pragmatism.
- Respectful solidarity.

Key-figures to datae



36

employees work for the association



1,193

volunteers registered



240

actions carried out by volunteers in 2021



1.1 million

million people reached through The SeaCleaners' actions



24

tons of waste have been collected since 2016

HIGHLIGHTS OF 2021

FINAL VERSION OF THE MANTA UNVEILED

A concentrate of ecology and technology, the MANTA will be the first factory ship capable of collecting, processing and repurposing large quantities of marine plastic waste.

After three years of research and development, the final version of this extraordinary vessel was unveiled for the first time on January 26 at an international press conference. The vessel is scheduled to be launched in 2025.

An optimized, virtuous MANTA

Since 2018, under the direction of the MANTA Innovation cluster, 60 engineers, technicians and researchers, five research laboratories and 20 external partners or subcontractors have been working on the design and technologies of the sailboat (*also read page 18*).

**Collection
speed:**
2 to
3 knots

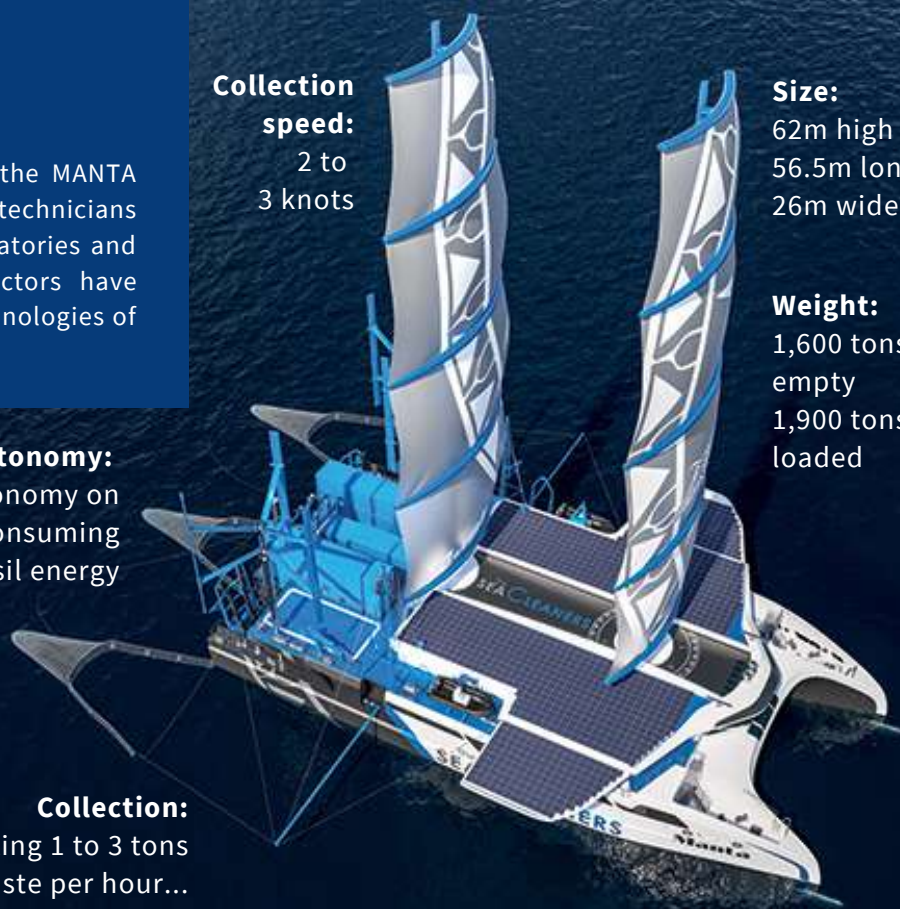
Size:
62m high
56.5m long
26m wide

Weight:
1,600 tons
empty
1,900 tons
loaded

Autonomy:
50 to 75% autonomy on
average, without consuming
fossil energy

Capacity:
Can accommodate
34 people on board

Collection:
Capable of collecting 1 to 3 tons
of waste per hour...



... For a target of 5,000 to 10,000 tons per year!

Among the project's latest advances are

- Areas that are too narrow or too shallow for the MANTA are now accessible thanks to two small boats on board, the MOBULAs
- Reduced drag on the surface collection systems makes the boat more energy efficient and far more effective at collecting waste than the original design
- The MANTA's increased maneuverability increases the boat's turning capacity, both for passing and processing a slick of waste and for getting closer to shore

- Its energy recovery system is one of the most virtuous and environmentally friendly. It allows it to process waste and to participate in the operation of the vessel.

Making the MANTA the most complete pollution control tool available required a huge technological leap forward. More than **30,000 hours of research and development** were devoted to developing it. Today, the boat is much more attractive and more technically accomplished in 2021 than it was 3 years ago.

THE UICN WORLD CONSERVATION CONGRESS

From September 3 to 11, all eyes were on Marseille, which hosted the IUCN World Conservation Congress, "the largest global event ever organized on biodiversity". The SeaCleaners participated for the first time in this highly important event, as a player in the field of pollution control.



**WE ARE AMBITIOUS
FOR PERFECT
SOLUTIONS,
PERFECT POLICIES,
NOBODY'S GOT THAT
LUXURY ANYMORE,
WE GOT TO GET
TO WORK, WE GOT TO
MAKE THINGS HAPPEN,
WE GOT TO MAKE IT
HAPPEN NOW**

Harrison Ford, actor



| A major challenge

We were looking forward to this week because the stakes of the event left no room for doubt: to put the protection of biodiversity at the forefront of the world's concerns and to finally take concrete decisions to respond to the problems related to an endangered biodiversity.

During a week at the Parc Chanot, we exchanged with political leaders, scientific experts and other organizations in order to find solutions together and push resolutions to move things forward.

| The Ocean Zone

The model of the MANTA did not fail to be talked about, in the blue zone, dedicated to the protection of the oceans. Many people stopped by and asked questions. This event was also an opportunity to exchange with renowned sea defenders on the different initiatives and resolutions to be taken, such as Prince Albert II of Monaco, Jean-Louis Etienne the explorer or the dancer Julie Gautier.

Our discussions with the Ministers of the Sea and Ecological Transition Annick Girardin and Barbara Pompili, the Minister of Education Jean-Michel Blanquer, or Peter Thomson (UN Special Envoy for the Oceans) have also shown us that the current state of the oceans is a real concern within political institutions and that the MANTA is part of the solutions to solve this problem.



| The village « Waste we can »

Our volunteers hosted a booth located in the Generation Nature Spaces. Families, school groups and other visitors were able to discuss with our team about plastic pollution. Our pedagogical tools helped the public understand and become aware of current issues. At The SeaCleaners, we are convinced that it is through awareness that we will achieve lasting changes in behavior.

HIGHLIGHTS OF 2021

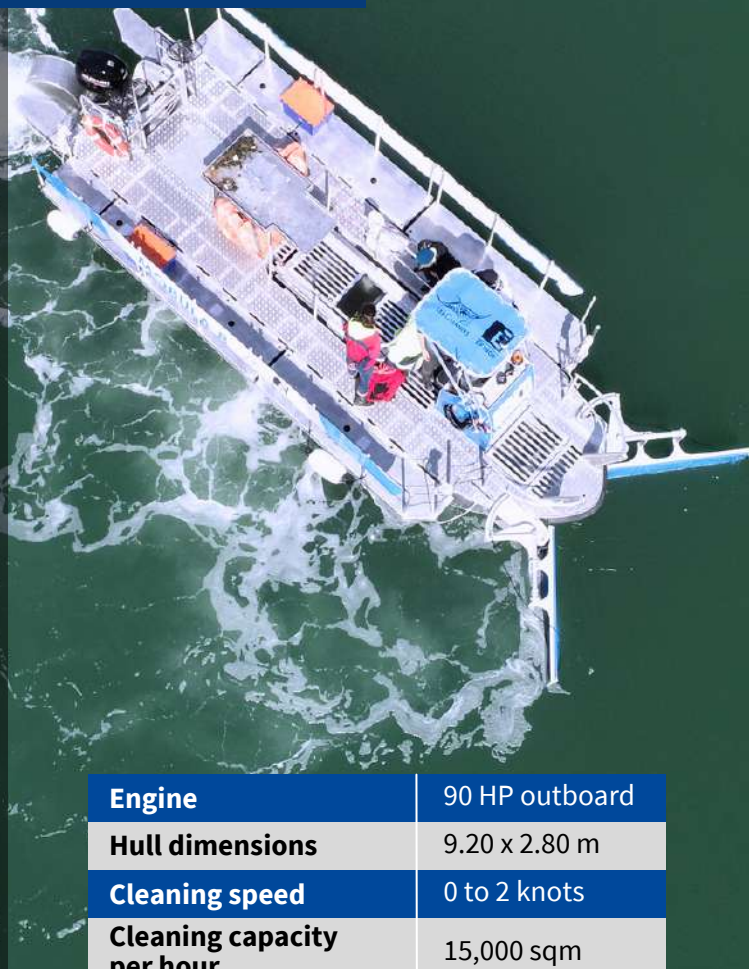
THE MOBULA 8 TAKES TO THE WATER

The Mobula 8 is the new bespoke multi-purpose vessel designed by The SeaCleaners, in partnership with EFINOR Sea Cleaner. The vessel was previewed in the company's workshops in June - the culmination of a close collaboration that has lasted two years - and then in Paris at the Bassin de Villette a few weeks later. First stop: Indonesia, in 2022.

Acting upstream

Studies on ocean plastic pollution show that rivers are one of the main sources by which land-based plastic enters the oceans. And land-based plastic alone accounts for 80% of the plastic entering the marine environment.

With the Mobula 8, a real autonomous waste recovery station equipped with an on-board sorting table, The SeaCleaners acts upstream by collecting waste in rivers, estuaries and near ports, mangroves, even in the most inaccessible places, before it reaches the ocean. Light and ergonomic, it can be transported by truck in a container and can intervene very quickly, going from navigation mode to clean-up mode in less than 3 minutes.



Engine	90 HP outboard
Hull dimensions	9.20 x 2.80 m
Cleaning speed	0 to 2 knots
Cleaning capacity per hour	15,000 sqm
Solid waste storage capacity	5 to 8 m3

The successful alliance with EFINOR Sea Cleaner



The Mobula 8 is the first product of a joint project with EFINOR SEA CLEANER. The company, based in Paimpol (Côtes d'Armor), specializes in the design, manufacture and marketing of multi-service pollution control vessels with patented technology.

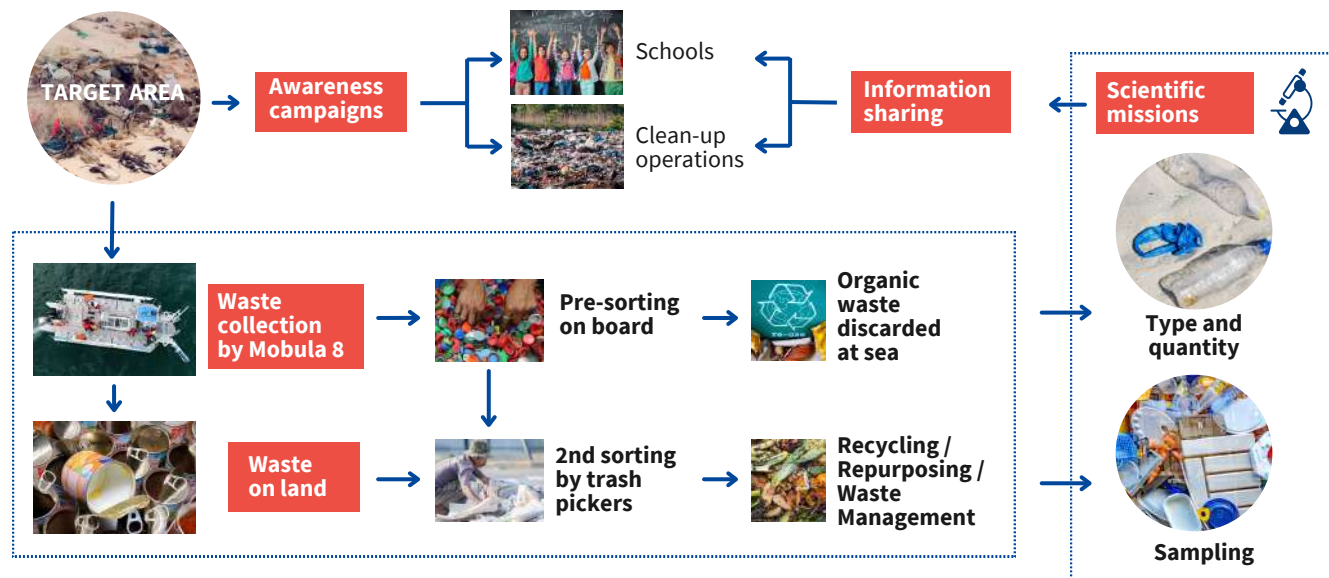
EFINOR SEA CLEANER has 10 years of R&D experience and more than a hundred references in 30 countries in the field of multipurpose pollution control vessels.

It was the desire to share their respective expertise that inspired the partnership between the two entities, in order to launch a program to co-develop innovative solutions for the collection of plastic waste, from which the Mobula 8 was born.

The Mobula 8 will be sent to Indonesia in the second half of 2022, where 5 of the 20 most polluted rivers in the world are located.



The waste collected by the Mobula 8 from Indonesian rivers will be taken to local sorting centers where waste from other streams, such as land-based and shipping waste, is also treated.



For all its actions in the field, The SeaCleaners wishes to act in a logic of co-construction and to encourage **a dynamic partnership with local actors, whether they be associations, institutions or private individuals.**

To complete the action of the Mobula 8, The SeaCleaners wishes to encourage local actions of waste recovery. These solutions, low tech and accessible, will generate local revenues and will contribute to the emergence of a social and solidarity economy.

Two parametric analysis models have been carried out by our partner Cap Gemini Engineering to determine the ecological and environmental impact of several solutions for the depollution and reuse of waste designed by The SeaCleaners. These analyses have shown that the Mobula 8 contributes to the implementation of circular economy loops in the field, making the boat **an economically viable solution with a reduced environmental impact.**

THE VOLUNTEER HUB

VOLUNTEERS ARE THE BEATING HEART OF THE SEACLEANERS

After a year 2020 marked by the cancellation of many events due to the Covid-19 pandemic, the year 2021 was "a very good year for volunteers," according to Romain Sorlin, director of the volunteer division.



The missions of the Volunteer hub

The missions of the Volunteer hub take 4 forms:

- Recruiting volunteers, developing their loyalty and coordinating all their actions
- Enable each volunteer to carry out the association's missions in his or her area
- Develop volunteer work in France and abroad
- Promote the association through its volunteers

10 tools for volunteers

In conjunction with the Awareness-raising hub (see also pages 14 and 15), 10 tools were created this year for volunteers, including:

- Five themed guides (collection guide, volunteer reporter guide, etc.)
- And animation games adapted and available in several languages

Volunteers and delegations

At the end of 2021, 1,193 people were registered as volunteers with The SeaCleaners. There are 100 very committed volunteers (8%), 200 involved volunteers (17%) and 900 support volunteers (75%).

In order to increase its territorial coverage and make its actions more effective, as close as possible to the needs on the ground, the volunteer division can rely on a decentralized organization: nine active regional delegations, four in advanced development (level 3), four in ongoing development (level 2) and one whose development is incipient (level 1), as well as 16 active local action groups (at the level of cities and metropolises)

The activated delegations



Level 3 : Ile-de-France – Bretagne – Nouvelle-Aquitaine – Auvergne-Rhône-Alpes.

Level 2 : Hauts-de-France – Normandie – Pays de la Loire – Provence Alpes Côte d'Azur.

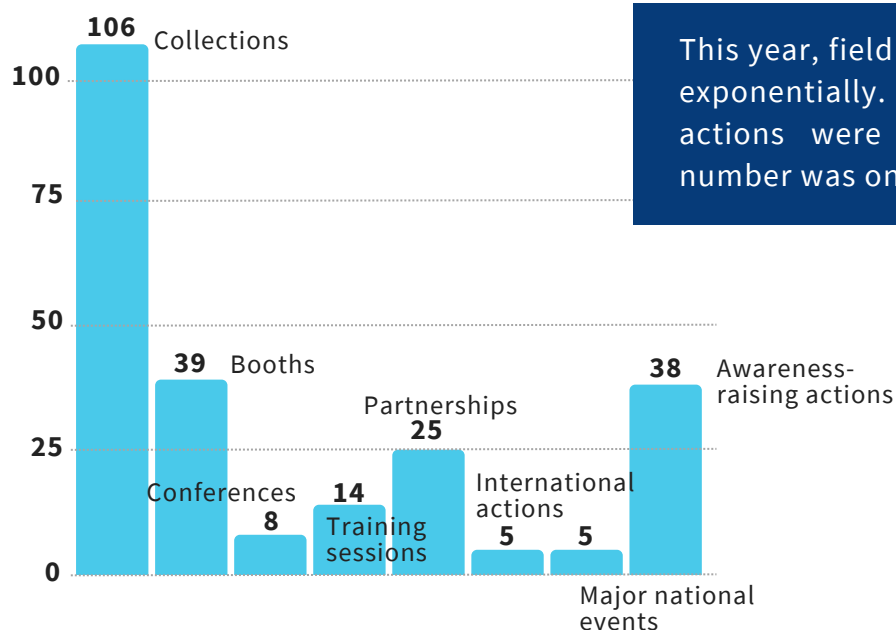
Level 1 : Occitanie.

In progress: Corse – Bourgogne-Franche-Comté – Grand Est – Centre & Val de Loire – Martinique – Guadeloupe – La Réunion.

THE VOLUNTEER HUB

HIGHLIGHTS OF 2021

240 actions carried out by volunteers



This year, field actions increased exponentially. In 2020, 50 field actions were conducted; that number was only 30 in 2019.



The highlights of 2021

World Clean-Up Day.

On September 18, more than 500 volunteers throughout France joined the clean-up operations organized by the regional teams. In Biscarosse, 107 kg of waste were collected. In Paris, 27,500 cigarette butts were removed from the streets.



The Transat Jacques Vabre.

From October 29 to November 7, about thirty volunteers from The SeaCleaners took over the Transat Jacques Vabre village to speak out for the oceans and say "stop" to plastic pollution.



The Francocean.

After a year marked by the cancellation of major festivals in 2020, 2021 was the opportunity for The SeaCleaners to set up shop at the Francofolies to meet festival-goers and raise awareness about plastic pollution.

Operations in Sri Lanka.

At the initiative of the Center for the Analysis of Ocean Resources in Sri Lanka (CENORA-SL), The SeaCleaners supported a large-scale clean-up operation on Prithipura beach in April. In half a day, 367 kilos of waste were collected. In December, the association also supported another cleanup, this time of the Hamilton Channel.

AWARENESS-RAISING HUB

CHANGING BEHAVIOR

The SeaCleaners acts against plastic pollution in a corrective and preventive manner, notably by educating and raising awareness among the general public. The role of the awareness-raising department is to raise awareness in order to bring about lasting changes in behavior, with one guideline: to encourage action and to do.



The hub's missions

The best way to fight against plastic pollution is to produce less of it. In order to understand the impact of this pollution on biodiversity and ecosystems, the awareness-raising center transmits knowledge about ocean protection in a fun and interactive way, always with the aim of encouraging people to take action.

HOW DO WE DO THIS?

- By designing educational tools accessible to all audiences
- By accompanying project leaders and teachers (national education or popular education staff) in raising awareness and fighting against plastic pollution
- By intervening in schools or leisure centers to spread key messages and eco-actions.



The recruitment of Stéphanie Poey

Stéphanie Poey joined the SeaCleaners team in September, as head of outreach

Resources to be found on The SeaCleaners website

In 2021, the Awareness hub has developed an educational program consisting of teaching sequences adapted to each educational cycle, to help teachers, educators and students raise awareness about ocean protection. All these sequences, accompanied by games, videos and posters, are freely available on The SeaCleaners website.



AWARENESS-RAISING HUB

WHAT HAPPENED IN 2021?

The SeaCleaners enlists new partners

In 2021, The SeaCleaners has forged key partnerships:

TEACH ON EARTH

This year, The SeaCleaners signed a partnership with the Teach on Earth mobile app to raise awareness about societal and environmental challenges. Together, the two organizations are embarking on the development of an online training course dedicated to adults "Become a SeaCleaner" around plastic pollution, which will be released in February 2022.



THE BELEM FOUNDATION

In November, The SeaCleaners signed a partnership agreement with the Belem Foundation, owner of the emblematic three-masted ship Belem, aiming to pool their forces to preserve the oceans.

This 3-year partnership will result in three types of joint actions:

- Several times a year, a speaker from The SeaCleaners will board the three-masted ship at sea to conduct plastic pollution awareness activities.
- During the Belem's stopovers, activities will be organized on the quay to raise awareness among the general public. Scientific conferences will also be organized.
- An educational booklet for schools containing games, quizzes and information on plastic will be produced.



RAVENSBURGER

The SeaCleaners has signed a partnership with the German company, specialized in the manufacture of toys, for the development of a board game for a large public (7 years and +). The game will start on June 8, 2023.

Ravensburger

A world tour of French high schools



No borders for the Awareness hub. During the French High School Week, which took place from November 29 to December 4, The SeaCleaners teamed up with six schools to speak out for the oceans.

The program included educational games, awareness-raising and waste collection, notably on the beach of Vera Cruz in Panama, where 145 kg of waste was collected.

In Toronto, the students of the French high school focused on the association's educational kit to help them understand everything about plastic pollution and its impact on the oceans.

THE SCIENTIFIC & OPERATIONAL HUBS

THE SCIENTIFIC HUB, THE CROSS-FUNCTIONAL DIVISION PAR EXCELLENCE AT THE SEACLEANERS

The scientific activity of The SeaCleaners links field activities with the international scientific communities mobilized on the issue of plastic waste. It also meets the association's need to base its projects on verified and scientifically validated knowledge.

The missions of the Scientific hub

The Scientific hub is the cross-cutting division par excellence of The SeaCleaners because it works with:

- The Awareness, Volunteer and Communications hubs to transmit and explain the messages
- The Operational hub to define the areas of action of the MOBULA 8
- With the MANTA Innovation Unit to define the scientific missions of the future giant of the seas

The arrival of Gwenaële Coat, scientific manager

Gwenaële Coat has joined The SeaCleaners team as scientific manager. Her mission is to compare and analyze the most efficient scientific campaigns in order to set up the protocols for the association's scientific missions, such as the one that will be operated by the Mobula 8 in Indonesia.



An unprecedented round table

As a member of the United Nations Decade of the Ocean's "A Clean Ocean" laboratory, the association organized on November 19 a unique roundtable discussion entitled "An Abyss of Plastic Wisdom, A Solutions-oriented Dialogue".

The SeaCleaners and the ISAB



The creation of the International Scientific Advisory Board (ISAB) reflects The SeaCleaners' desire to base its projects on a rigorous scientific approach. The ISC, composed of 13 experts from around the world, helps the association define its thematic orientations, assists in coordinating the scientific missions that will be embarked on the MANTA, provides strategic advice and facilitates the integration of local scientific networks.

The members of the ISC:

- Dr François GALGANI - Project manager, IFREMER
- Professor René GARELLO - Professor Emeritus; IMT ATLANTIQUE
- Dr. Bernard GINDROZ - President, BMGI Consulting
- Dr. Britta Deni HARDESTY - Senior Principal Investigator, CSIRO
- Professor Jean LE BIDEAU - Expert in materials science, IMN Jean ROUXEL, University of Nantes
- Laurent LEBRETON - Oceanographer Physicist, marine pollution modeling, The OCEAN CLEANUP FONDATION
- Dr. Marc LUCAS - Senior oceanographer and project leader, CLS
- Dr Christophe MAE - Physical oceanographer, IRD
- Dr Umi MUAWANAH - Researcher, Ministry of Maritime Affairs and Fisheries, KKP
- Dr Sarah-Jeanne ROYER - Bio-geochemist and oceanographer, Hawai'i Pacific University
- Dr Jean-François SASSI - Expert in polymer chemistry, bio-polymers, fine chemistry, CEA-CADARACHE
- Odeline BILLANT - PhD student, UBO (Observer)
- Dr. Isabelle POITOU - Director, Mer-Terre (Observer)

In November 2021, Gwenaële Coat brought the voice of the oceans to **COP26** in Glasgow and led a conference posing the terms of an unprecedented equation: "To what extent does ocean plastic pollution contribute to global warming?"

This exchange brought together scientists, policy makers, industry players and the media to discuss solutions to combat the scourge of plastic pollution.

THE SCIENTIFIC & OPERATIONAL HUBS

THE OPERATIONAL HUB, A NEW HUB AT THE SEACLEANERS

To support and coordinate the association's projects, which are advancing at a steady pace in the field, a new pole has been created at the SeaCleaners in 2021: the Operational hub.



The mission of the operational division

The mission of the Operational hub is to establish and coordinate all field operations with the association's partners.

The Mobula 8 enters the Seine

Before leaving France for Indonesia, where it will begin its marine clean-up campaign, the MOBULA 8 was presented in Paris on June 18 and 19 during the major citizen mobilization operation "Ménage ton Canal". For two days, The SeaCleaners' new multi-purpose boat was able to publicly demonstrate its cleaning capabilities on the Bassin de la Villette.

The SeaCleaners' operations expand in Indonesia



The SeaCleaners has taken a crucial and much-anticipated step in its development: this year, The SeaCleaners has begun operations in Indonesia. Oceanographer Priska Widyastuti, our representative on the ground, is working in cooperation with local actors to carry out joint clean-up actions, particularly in the regions of Denpasar and Amed.

Working sessions with the ambassadors of Southeast Asia

This summer, The SeaCleaners teams met with representatives in France from Indonesia, Sri Lanka and Thailand for working discussions on the deployment of the MOBULA 8 expedition in 2022 in Indonesia.

MANTA INNOVATION

MANTA Innovation is the integrated engineering office for the non-profit organisation The SeaCleaners. With the support of a consortium of industrial and academic partners, its missions is to help clean up plastic in the oceans while developing innovative technological solutions.



THE MANTA, AN ECO-DESIGNED BOAT

To determine the best design choice and define the most environmentally friendly materials to use, the MANTA Innovation cluster carried out a complete Life Cycle Assessment (LCA) of the boat.

To make the MANTA the most energy-efficient vessel possible, trade-offs had to be made.



The size of the MANTA was reduced to reduce its mass and limit the quantity of raw materials used in the construction of its hull.



The waste-to-energy conservation unit developed (WECU) reduces the environmental impact of the plastic collected by 22%.



At the end of its life, the recycling process of the MANTA's superstructure will reduce carbon emissions by about 87%.

PROGRESS MADE IN 2021

First consultations with shipyards

In order to carry out the Basic Design of the MANTA, a consultation of naval architects was carried out. It ended with the selection of LMG-Marin, which will accompany The SeaCleaners in its shipyard consultation activities scheduled for 2022. On the basis of the concept design work, carried out in 2020, a pre-consultation of shipyards capable of building the MANTA has been conducted.



Collection belt

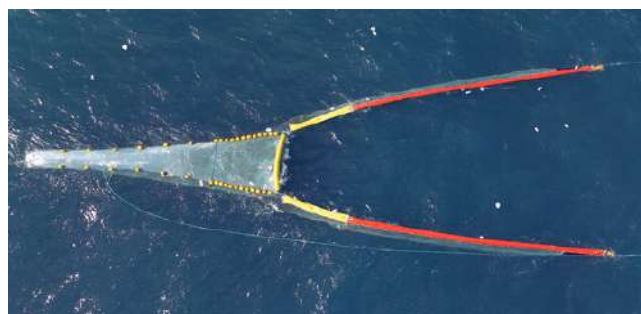
In 2021, new tests were carried out on different collection belt configurations (types of belt, suction, feed speed, etc.), on the CleanersLab prototype, in coordination with the partners of the technical consortium. These studies have allowed to define a pre-dimensioning of the collection belts, and to realize the preliminary integration in the MANTA.



Surface collection system

Manta Innovation tested 1/4 scale prototype nets with different opening systems. Studies on the definition and integration of the outriggers holding the nets in position on the MANTA were also re-launched.

In parallel with these tests and studies, operating procedures have been established to describe the use of the nets (launching, turning, storage, ...) and to best size the equipment necessary for their use (winches, gantry, tanks, ...).



Venicular propulsion

The development studies of the automated rigging for the MANTA, as well as the integration studies in the ship were continued with our providers.

Waste sorting and preparation plant

The studies carried out have confirmed the integration of the various waste sorting and treatment equipment (shredding, drying, etc.) in the area reserved for the plant in the MANTA. These studies have also made it possible to specify the masses and the electrical consumptions of the installed equipment, which are essential data for the naval architecture studies of the MANTA.



MANTA INNOVATION

Waste-to-energy conversion unit

With its industrial partners, Manta Innovation carried out specific preliminary design studies to size and integrate the various systems and to optimize the recovery of waste heat (residual heat from a process that is not used by the process) from the recovery unit. Digital mock-ups, energy production/consumption balances and integration specifications were drawn up and made it possible to carry out naval architecture studies, not only from a structural point of view, but also from an energy point of view.



Integration studies and energy systems tests

The year 2021 was also an opportunity to continue the development of onboard energy systems, to select suppliers and equipment for the production of renewable energy and to integrate a circuit for the recovery and use of waste heat to further reduce the MANTA's carbon footprint. The surfaces equipped with photovoltaic panels have been maximized; a support arm to ensure the immersion and lifting of the hydro-generator has been developed; two vertical axis wind turbines have been selected and integrated on the MANTA.



Study of the MOBULAs

Several days of tests of the various collection systems (baskets, mats, nets, etc.) were carried out on demonstrators, in order to improve the systems and select the most efficient and robust equipment for the MOBULA 8. Cost reduction studies have also been conducted to optimize the design and construction of the upcoming MOBULA 10.



Life Cycle Analysis (LCA) and technical-economic study of circular economy loops

The comprehensive life cycle analysis study conducted in 2020 was the keystone of the choices that enabled us to improve the design and operation of the MANTA, particularly in order to minimize its energy consumption and environmental impacts.

The MOBULAs were also the subject of an LCA study and a technical and economic analysis. The results made it possible to determine the number of collection boats and to size the facilities so that the recovery of the waste collected (material and/or energy recovery) would be beneficial for the environment and economically self-sufficient.

ECOPLEX, TO REDUCE THE ENVIRONMENTAL IMPACT OF SHIPS

In the context of global warming, the International Maritime Organization (IMO) has committed to reducing the carbon emissions of the world fleet by 40% between 2008 and 2030.

One of the solutions for achieving this objective is to anticipate and reduce the environmental impact of ships, by intervening at the design stage. This is the challenge of the EcoPlex project.

Launched in June for a period of 18 months, the EcoPlex project aims to provide an innovative solution to ensure digital continuity between the design activities of a ship and the analysis of its life cycle. This project is a collaboration between several companies and laboratories, including Manta Innovation, Obeo, SDI, Capgemini Engineering, LS2N and EFINOR Sea Cleaner.



ENHANCE THE VALUE OF ALL THE ASSOCIATION'S HUBS TO BETTER HIGHLIGHT ITS POSITIONING

The presentation of the definitive MANTA concept and the MOBULA 8 have kept our communications teams busy this year. But these two major events were not their only missions. The communications department worked to promote all of the activities of The SeaCleaners' other divisions, in order to emphasize its position as a complete player in plastic decontamination.



Press coverage of the MANTA unveiling

With the unveiling of the "new" MANTA in January, the communications department's mission was to explain how the latest technical developments make the giant of the seas more effective in the fight against plastic pollution.

The other task was to attract new supporters. While it was of course extremely important to get the word out about MANTA in France, the objective was also to make the boat known internationally, where The SeaCleaners wants to increase the number of large-scale actions.

Press coverage in figures:



Estimated exposure:

49 million
people

COMMUNICATIONS HUB

MANTA's Reveal digital support

The SeaCleaners was accompanied by the influence and communication agency JIN during the MANTA reveal, via an intensive digital campaign from Tuesday, January 26 to Wednesday, February 10.

A mechanism combining videos, infographics, sponsorship and relays by influencers, personalities and well-known institutions (including actor Jean Dujardin, pole vaulter Renaud Lavillenie and the World Economic Forum), as well as in-depth work to convince the specialized digital media, gave MANTA a high profile, reaching several generations.



A new website www.theseacleaners.org was also created, more modern, more dynamic, more didactic on the impacts of plastic pollution.



MANTA's Reveal advertising support

The video production company COMQUEST has produced pro bono for The SeaCleaners its very first advertising spot. Called "The Plastic Hunter", this 25-second film was graciously broadcast by the 3 main French television channels (TF1, France 2 and M6), as well as by several TNT channels thanks to the support of the SNPTV.

Web and print ads were also broadcast in some twenty traditional and digital media, again through free space, with the support of the SRI.



Finally, the three major national advertising agencies specializing in urban advertising (ClearChannel, JC Decaux, MediaTransport) offered us more than 2 million logs in digital and print advertising.

This campaign, which cost The SeaCleaners nothing, represented the equivalent of an advertising investment of 1.2 million euros.

Digital campaign results

 **over 11 million**
content impressions

 **3.3 million**
views for videos

 **+52%**
followers on Instagram

 **+35%**
engagement rate on Facebook

 **+268%**
engagement rate on LinkedIn

COMMUNICATIONS HUB

Artistic collaborations

SAYPE signs a monumental and ephemeral work to benefit The SeaCleaners

The internationally renowned Franco-Swiss artist Saype has taken over the valleys of La Coquerelle, in the Jura mountains, to support The SeaCleaners.

His imposing fresco (160 meters!), entitled The Sea Cleaner, features a little boy building a boat out of plastic waste. An exclusive print of 200 lithographs of the work is being sold by the Lions Club of Delémont. Proceeds benefit The SeaCleaners.



AWAKE X SUZANNE for The SeaCleaners

This project was born from the meeting between the French brand AWAKE and the singer SUZANNE. The watch imagined for this collaboration is made from recycled fishing nets and runs on solar energy.

It also offers unlimited autonomy thanks to its sensor that absorbs any form of light. A very successful concept that makes it the watch with the lowest possible impact on the environment! All sales proceeds will be donated to The SeaCleaners.



A new alliance!

This year, The SeaCleaners joined as an active member the Clean Seas campaign, launched by the United Nations Environment Programme (UNEP) in 2017.

With 63 partner countries, the Clean Seas campaign is a global movement to fight marine plastic pollution from source to sea. The commitments made by signatory countries cover more than 60% of the world's coastline. In keeping with the mission of the association, The SeaCleaners is eager to contribute concretely to the success of this initiative by raising awareness, inspiring by example and acting on the ground with our depollution solution, the Mobula 8, and during clean-up operations on land.



PARTNERSHIP AND DEVELOPMENT HUB

SUPPORTING THE FIGHT AGAINST PLASTIC POLLUTION

The SeaCleaners' Corporate Partners accompany the organization every day in the development of its ocean protection missions. And their support goes far beyond the construction of the MANTA. They support the organization's action in its field operations, in the development and deployment of the Mobulas and during awareness campaigns.



More than financial support

As soon as a company becomes a Corporate Partner, the hub takes care of its support and the implementation of its sponsorship.

How do we do this?


- By supporting the company in its CSR approach
- By meeting the needs of its employees in terms of commitment
- By providing a toolbox dedicated to the activation of partnership
- By making it join a network of committed companies
- Involving them in the technical development of the organization's projects


The relationship between The SeaCleaners and its Corporate Sponsors is also an opportunity to co-create content and operations to advance the fight against plastic pollution and raise awareness among a very large audience.


The key-figures

The SeaCleaners can rely on a very strong and loyal base of supporters who are contributing to its growth:

 **5,000**
individual
donors to
date

 **1,022**
unique donors via the website in
2021, compared to **553** in 2020,
an increase of **84%**.

 **216**
people have made a donation
for the first time this year

 **58**
patrons, **21** of whom joined the association...
...Coming from **15** different sectors of activity (where
most associations cover 5 to 6 sectors in general)

This diversity of actors involved is the strength of The SeaCleaners and reflects the growing commitment of companies to the ecological cause and the preservation of the oceans.

PARTNERSHIP AND DEVELOPMENT HUB

They joined The SeaCleaners this year

This year, several Corporate Partners have joined The SeaCleaners adventure. They include:

THE PICOTY ENDOWMENT FUND

The Picoty Group, an energy company, has made a four-year commitment to The SeaCleaners.



IKKS

The French ready-to-wear brand joined The SeaCleaners adventure in May. In addition to this sponsorship, IKKS will support the association every year with a dedicated operation. This year, 5% of sales of the "Love of the Ocean" capsule collection were donated to The SeaCleaners.



ENTENDRE

For over 40 years, Entendre hearing aid practitioners have been accompanying, advising and caring for the hearing impaired. Entendre hearing care professionals have always been aware of the health issues facing the hearing impaired and have naturally turned their attention to environmental health.



A new look for the Corporate Partners web platform

The Corporate Partners web platform is a toolbox developed for The SeaCleaners' Corporate Partners so that they can promote their patronage both internally and externally, engage their employees in the fight to preserve the oceans and communicate with their ecosystems.

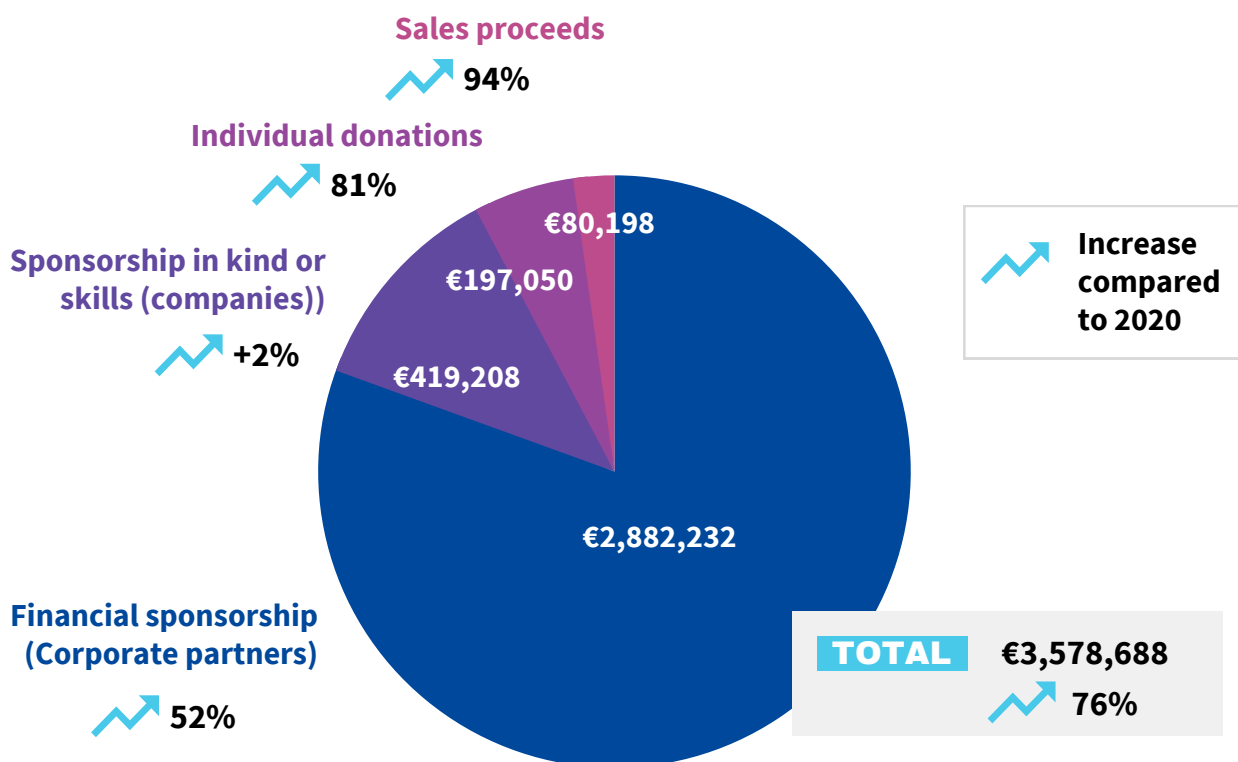
With some 60 tools, this platform is at the heart of the association's relationship with its sponsors, enabling it to make them true ambassadors of the cause for which The SeaCleaners is fighting.

Available since 2020, this platform has been completely renovated and greatly expanded this year.



Total Operating income	€3,159,480.00
Total Charges d'Exploitation	€3,203,171.00
Total Financial income	€839.00
Total Financial expenses	€20.00
Total Exceptional income	€105,969.00
Total Exceptional expenses	€42,757.00
Surplus	€20,340.00

Fundraising Amounts received



Commitments in kind and in skills are stable from one year to the next, testifying to the loyalty of the technical partners involved in the development of waste collection and recovery solutions.

New corporate partners in 2021 represented a total multi-year commitment of €4,631,823.

FINANCIAL BALANCE SHEET

Details of sponsorship in kind and in skills

	2021	
Duo Display	€22,233	Supply of stands and event signage
MTB	€48,528	Design of the waste sorting plant and the energy recovery system
Air Liquide	€248,047	Provision of personnel, Mobula 8 and energy recovery system
Jacques Frelin	€386	Supply of wine for TSC events
Technip Energies	€55,000	Consultancy for waste-to-energy plant and offshore collection systems
W2P	€2,600	Development of the TSC website
Terre Majeure	€2,600	PR service for the unveiling of the Manta
Jin	€2,474	Influencing and social networking services
Turbé	€20,090	Design of collection mats
Intralox	€10,000	Design of collection mats
LMG Marin	€6,430	Sizing of the collection nets
Emeraude Solaire	€5,760	Design study and sizing of the solar panels
Lumen at Work	€5,000	Design study and sizing of the lighting on board the Manta
Clikeco	€6,933	Accompaniment of hazardous waste management in collection
Captavideo	€3,217	Realization of the live unveiling of the Manta
Total mécénat N&C	€419,208	

FINANCIAL BALANCE SHEET

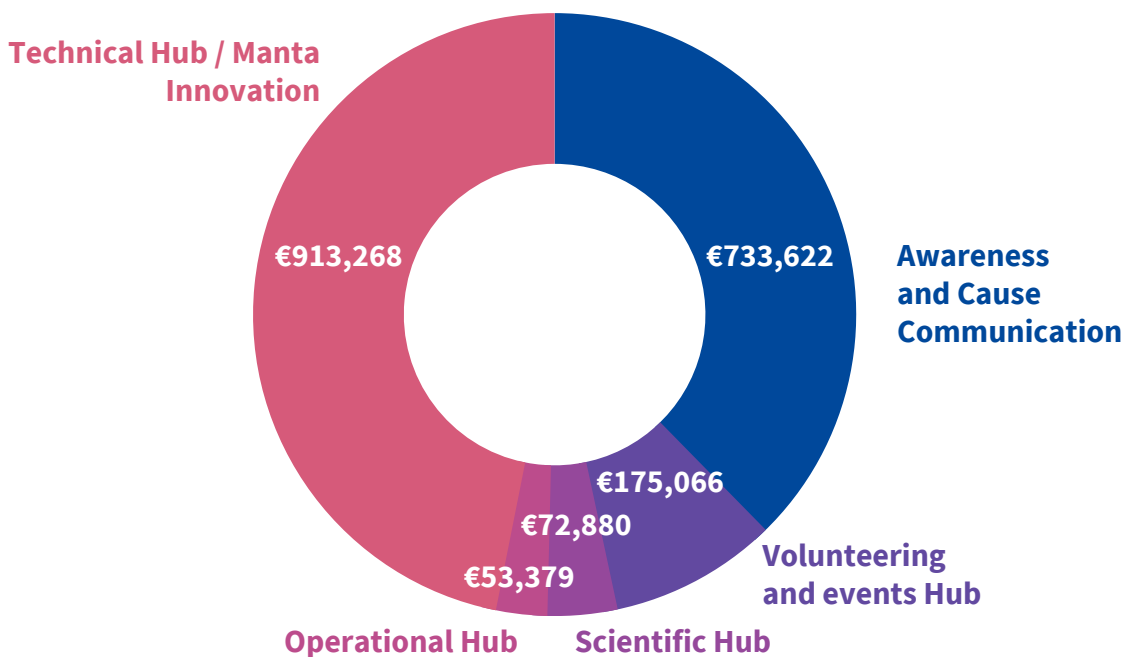
EXPENSES

Associative missions	€1,948,216
Administrative and collection support functions	€1,254,955
TOTAL	€3,203,171

→ The SeaCleaners has chosen to invest in the development, recruitment and investment required to support this atypical project, with its unique DNA and strong industrial naval engineering dimension.

This transitional period is linked to the development strategy of The SeaCleaners. The association has given itself five years to reverse the trend and move to a more traditional division between its associative missions and support functions.

PER MISSION



TOTAL €1,948,216

→ The strong pillars of The SeaCleaners are curing plastic pollution and preventing plastic pollution.

After a year 2020 that hampered the holding of field actions, The SeaCleaners has put awareness back at the heart of its missions this year by promoting actions to the general public.



The
SEACLEANERS



www.theseacleaners.org

The SeaCleaners

10 rue de la Drisse, 56470 La Trinité sur Mer - France
Association under the 1901 French law recognised as being
of general interest