

MEDIA KIT

November 2021

# THE SEACLEANERS PRESENTS THE MANTA



#BeatPlasticPollution  
#MantaProject  
#PlasticHunter

## A giant sailboat on the attack of oceanic plastic pollution

The first concentrated ecology and technology factory ship capable of collecting, processing and recovering large quantities of marine plastic waste.

[www.theseacleaners.org](http://www.theseacleaners.org)



# SUMMARY

## 4-6

### Press Release:

The SeaCleaners unveils the Manta, its pioneering and ecofriendly sailboat to collect and process large quantities of marine plastic waste

## 7-13

The Manta a unique multi-purpose vessel to combat plastic pollution

Key figures of the Manta

Several missions for a complete response

Why collect waste at sea?

Technological prowess inspired by a biomimetic approach

The new generation onboard plant: everything is recovered, nothing is wasted

## 14

Act where it's urgent

The Manta is the only deep-sea vessel capable of crossing the oceans to intervene rapidly anywhere in the world and address areas polluted by natural or climate disasters

## 15-17

The Manta - an ecofriendly sailboat, operating autonomously at 75% without fossil fuels - an unprecedented technological feat

## 18

The program up to 2024

## 19-20

Ocean plastic pollution, a catastrophic scene

## 21

The Manta, the flagship project of The SeaCleaners

## 22

They stand by our side

## 23

Yvan Bourgnon, a champion moved to fight for a great cause

## 24

Press Contacts

**The SeaCleaners:**

Valérie Amant:  
Director of communications  
[v.amant@theseacleaners.org](mailto:v.amant@theseacleaners.org)  
+33 6 83 37 66 21

Elise d'Epenoux:  
International communication manager  
[e.depenoux@theseacleaners.org](mailto:e.depenoux@theseacleaners.org)  
+33 6 79 17 43 49

# **LINKS TO DOWNLOAD IMAGES, PHOTOS AND VIDEOS**

## **VISUALS:**



[3D Images of the Manta \(royalty-free\)](#)

[Photos of Yvan Bourgnon](#)

## **VIDEOS:**



[The Manta in 3D: a giant combats ocean plastic pollution](#)

Available on Demand: Video clips  
and other images (royalty-free).

# PRESS RELEASE

**THE SEACLEANERS UNVEILS THE MANTA, ITS PIONEERING AND ECO-DESIGNED SAILBOAT FOR COLLECTING AND PROCESSING LARGE QUANTITIES OF MARINE PLASTIC WASTE.**

*A multi-purpose factory boat, propelled by renewable energies, embodying a new way of acting to protect the oceans.*

Paris, January 26th, 2021

Three years of research and development resulted the Manta, a giant catamaran, the first factory boat designed to collect and process large quantities of floating plastic macro-waste at sea.

Its biomimetic design, innovative hybrid propulsion system and power supply from renewable energy sources will enable the Manta to operate 75% of the time autonomously, without using fossil fuels, with a minimal environmental footprint.

This extraordinary ship will also serve as a cutting-edge scientific laboratory for the observation, analysis and understanding of ocean plastic pollution and as an educational platform open to the public.

The Manta will be launched in 2024.



Next

**Every minute 17 tons of plastic are dumped in the oceans...** amounting between 9 to 12 million tons each year. According to the United Nations (UN), if ambitious actions are not taken, then oceans will contain more plastic than fish by 2050.

Yvan Bourgnon - adventurer, champion and record-holding navigator - was tired of hitting floating objects during competitions and seeing paradise turned into a dump. He decided to take action.

**How?** By creating the association The SeaCleaners and setting up a centre of expertise dedicated to the construction of a pioneering ship: the Manta, the first sea-cleaning boat capable of collecting floating plastic waste on an industrial scale.

## AFTER 3 YEARS OF RESEARCH AND DEVELOPMENT, THIS CONCENTRATE OF ECOLOGY AND TECHNOLOGY IS UNVEILED TODAY.

Thanks to a unique combination of collection means, the Manta will be able to collect both floating macro-waste and smaller debris from 10 millimetres upwards and up to one metre deep.

**A world first:** the Manta will be the only workboat capable of managing 100% of the plastic waste collected at sea thanks to its onboard factory. It will be sorted manually, treated and recovered using an energy conversion unit capable of converting all the plastic collected into energy with a minimal environmental footprint. With a waste collection and processing capacity of 1 to 3 tons per hour, the Manta's objective is to rid the oceans of 5,000 to 10,000 tons of plastic waste per year.

**The propulsion of the vessel** will be provided by a customised hybrid system combining 1,500 m<sup>2</sup> of sails installed on automated rigging and electric motors. Electricity will be produced by a series of on-board renewable energy production equipment (two wind turbines, hydro-generators, almost 500 m<sup>2</sup> of photovoltaic solar panels) and by an on-board waste to energy unit. This unique and innovative system will enable the Manta to operate autonomously on average 75% of the time, without using fossil fuels, with an environmental footprint reduced to the strict minimum.

**In addition to its vocation as a "cleaner of the seas", three other missions are assigned to the Manta**, making the ship a complete solution for combating plastic pollution, both corrective and preventive.

- 1. In co-development with local decision-makers, to contribute to the transition towards a circular economy** in countries affected by plastic pollution, by demonstrating and disseminating innovative solutions for the management and treatment of plastic waste and clean shipping solutions for "green ships" and "smart ships" ;

Next

**2. Receiving the public aboard** for awareness and education actions on plastic pollution ;

**3. To host international scientific missions**, thanks to its on-board research facilities, on the quantification, characterisation and localisation of plastic waste slicks. The data collected will be shared in open Data.

**The Manta will intervene mainly in Asia, Africa and South America**, on strategic sectors where marine plastic pollution is particularly dense: coastal areas, rivers, large rivers mouths and estuaries. A deep-sea vessel, the Manta will also be capable of intervening rapidly in polluted areas following a natural or climatic disaster (typhoons, tsunamis...).

**A technical consortium of some twenty companies and five research laboratories** are at work on the design and development of the boat. The selection of the shipyard that will build the Manta will take place in 2021, the launch and the first collection campaigns will take place in 2024.

Key figures of the Manta	
<b>Length</b>	56,5 meters
<b>Width</b>	26 meters
<b>Height</b>	62,5 meters
<b>Collection capacity per hour</b>	1 to 3 tons per hour
<b>Size of waste collected</b>	From 10 millimeters
<b>Collection depth</b>	1 meter below the surface
<b>Number of people aboard</b>	34

## Institutional partnerships



## Media Contacts

**The SeaCleaners:**  
Valérie Amant:  
Director of communications  
[v.amant@theseacleaners.org](mailto:v.amant@theseacleaners.org)  
+33 6 83 37 66 21

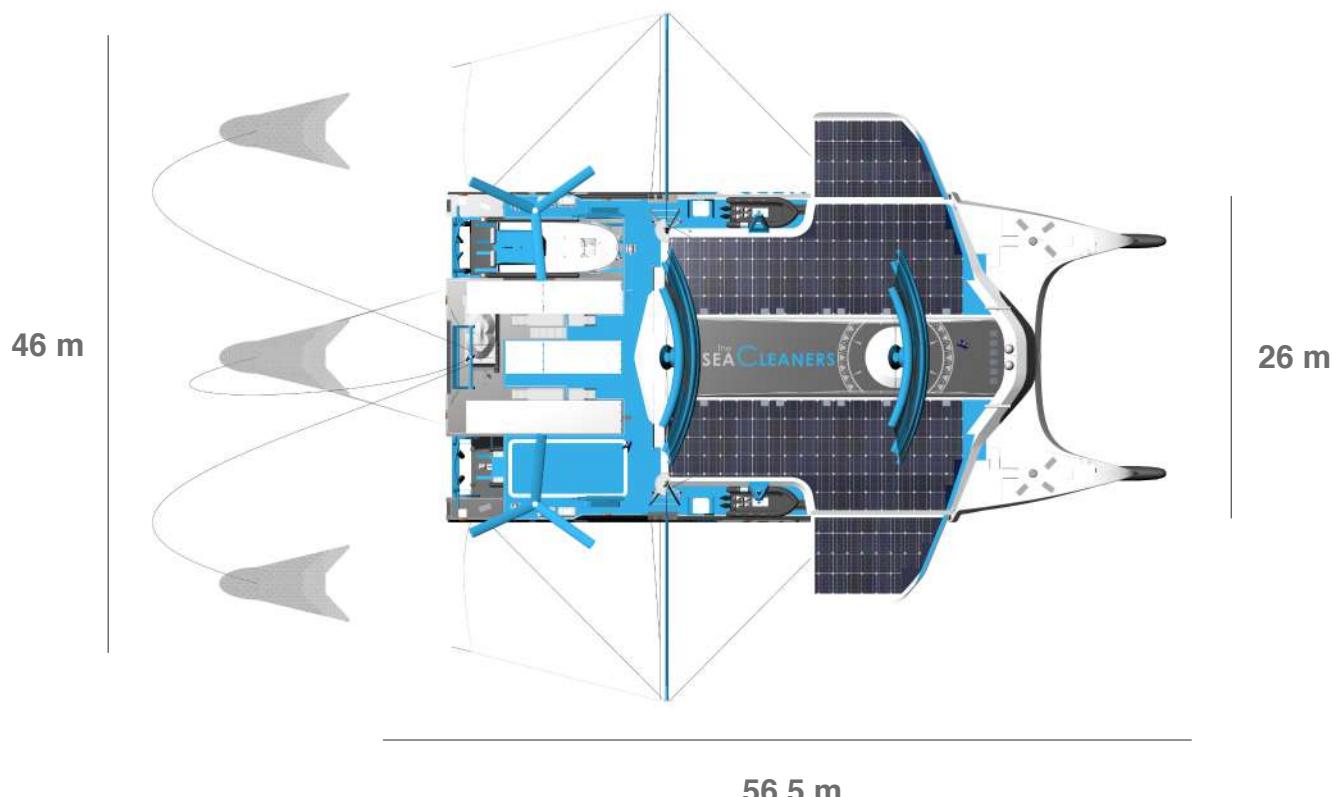
Elise d'Epenoux:  
International  
communication manager  
[e.depenoux@theseacleaners.org](mailto:e.depenoux@theseacleaners.org)  
+33 6 79 17 43 49

## THE MANTA, A UNIQUE MULTI-PURPOSE VESSEL TO COMBAT PLASTIC POLLUTION

*The Manta is a pioneer in many respects: by its size, its ambition, the nature of its missions, its innovative technologies and ecological design, and its agility of action.*

### KEY FIGURES OF THE MANTA

Length	56,5 meters
Width	26 meters
Height	62,5 meters
Total weight	1,600 tons empty 1,900 tons loaded with food and equipment needed for an expedition
Draught	3,1 meters
Transit speed	6 knots on average (maximum speed) 8 knots (maximum speed) 12 knots (top speed)
Collection speed	2 to 3 knots



<b>Number of people abord</b>	34 people abord 22 crew members including 3 operators for waste sorting and 2 operators for the waste-to-energy conversion unit 12 passengers (including 6 to 10 scientists)
<b>Collection system span</b>	46 meters (with outrigging deployed)
<b>Collection capacity per hour</b>	1 to 3 tons per hour
<b>Collection target per year</b>	From 5,000 to 10,000 tons per year
<b>Size of waste collected</b>	From 10 millimeters
<b>Collection depth</b>	1 meter below the surface
<b>Average duration of a collection campaign</b>	3 weeks
<b>Days operational per year</b>	300 days per year
<b>Capacity to repurpose waste (% waste and energy produce)</b>	95 to 100%
<b>Storage capacity (all waste combined)</b>	206 m <sup>3</sup>
<b>Boat autonomy</b>	75% autonomous (without consuming fossil energy)
<b>Area on-board dedicated to events raising awarness</b>	Approximately 200 m <sup>2</sup>
<b>Area on-board dedicated to scientific research</b>	Approximately 50 m <sup>2</sup>
<b>Sails surface area</b>	1 500 m <sup>2</sup>
<b>Mobility</b>	3,500 nautical miles (6,500 km) the equivalent of a transatlantic crossing
<b>Number of people and entities working on the development of the Manta</b>	5 research laboratories 17 external partners or subcontractors 58 engineers, technicians and researchers 3 years of research and development

## THE MISSIONS OF THE MANTA

***Beyond the Manta's principal mission of "cleaning the seas" and repurposing plastic, the Manta is assigned other missions, making it a complete and unique solution to combat plastic pollution.***

### An educational platform – a vector of awareness and prevention

After 3 weeks at sea collecting plastic waste, the Manta will visit coastal ports in the area to raise awareness, educate and present the The SeaCleaners missions. Each day in port, the Manta will welcome the public aboard for conferences and activities regarding plastic pollution. A dedicated area of 200 m<sup>2</sup> and a conference room for 80 people are on-board the Manta to accommodate these events.

### A tool to promote the circular economy

The Manta, itself, will be an example of technological possibilities to encourage and support local actions towards improvements of their waste and recycle management. The Manta's vocation is to be a technological demonstration vessel to support local stakeholders in the development and structuring of local waste management and recovery sectors. With a view to skills transfer and co-development, visits will be hosted aboard the Manta with local political, industrial and economic decision-makers, in order to adapt to local contexts the solutions presented, in particular the Mobula (small collection boats), the waste-to-energy conversion unit and the Manta's clean navigation technologies, which can be used for the development of "green ships" and "smart ships".

### A scientific laboratory to study plastic pollution

The Manta will welcome international researchers aboard for long-distant missions at sea. A team of 6 to 10 researchers can be accommodated. At their disposal are work rooms, a dry lab, a wet lab, and the oceanographic equipment necessary to geolocate, quantify and characterize plastic pollution. Research results will be published and data collected will be available in an "open data" platform. The aim is to advance the fight against plastic pollution backed by scientific results.

### An ambassador boat for the fight against marine plastic pollution

The Manta will act as an ambassador to demonstrate the affordability and efficiencies of technologies to collect and process plastic pollution. The aim is to lead the way by being a pioneer, by encouraging other players. Show the ease of use in the technologies and tangible evidence that actions combating plastic pollution results in outcomes such as restoration of marine ecosystems and fish reserves, stable local economies and tourism. Open dialogues with communities, companies and even countries to mobilize and to take actions to protect the oceans. This is a virtuous circle of dynamic interconnections.

**Collecting at sea creates a virtuous circle: it gives concrete, rapid and visible results, which in turn help to raise awareness at all levels of society. By restoring marine ecosystems and fish stocks, helping to maintain local economies and restore the attractiveness of maritime tourist areas, the collection dynamic creates intermediate victories against plastic pollution, which are essential to mobilise public opinion and decision-makers ever more widely around the protection of the oceans.**



## WHY COLLECT OCEAN PLASTIC POLLUTION?

*In its latest resolutions on marine plastic pollution, the United Nations recommends cleaning up ecosystems in parallel with upstream prevention and awareness-raising work.*

### WHY?

#### Precautionary principle

Aimed campaigns towards reducing the production and consumption of plastics are effective long-term goals. In the interim, plastic pollution continues to break down into microplastics that are adsorbed and absorbed by marine life, and in turn, end up in our food.

Recent research at the University of Arizona (USA) detected micro-plastics in human organs for the first time. Presently, the toxic effects to human health are largely unknown.

#### Environment motivation

Plastic pollution is the leading cause of death for marine wildlife: 1 million marine birds and more than 100,000 marine mammals die each year from ingestion of or suffocation by plastic pollution. Each kilo of plastic pollution collected is a step forward in saving marine wildlife.

#### Citizen mobilisation

Unite people, who will adopt the role as goodwill messengers to share in solutions and successes - big and small.

#### Dukdukdiya\*

Entice people to seek solutions and take actions to clean the oceans, rather than giving up easily because of the magnitude of the problem. We refuse resignation. We place ourselves on the side of the "solutionists", on the side of those who think that action is always preferable to passivity.

\*Flight of the Hummingbird (Quechan fable) - Those who are not afraid to act, and who are aware of what is at stake, can make the biggest difference. We must try to do what we can.

## BIOMIMETICS INSPIRE TECHNOLOGICAL FEATS TO COLLECT PLASTIC POLLUTION AT SEA

*The Manta's design consolidates performance and simplicity.*

*The Manta ray eats as she swims with her mouth wide open, passing water through her gill arches filtering for zooplankton, jellyfish and crustaceans. The Manta sailboat emulates the manta ray, passing water between its hulls to filter for plastic pollution feeding its waste-to-energy conversion unit to create energy for its propulsion system, and in turn, accomplishing its principal mission of “cleaning the seas”.*

### FOUR COMPLEMENTARY COLLECTION METHODS

**Inclined conveyor belts** are located under the boat's platform between the hulls, in the middle of the ship.



#### INNOVATIVE

**The Mobula (the eagle ray) – Two multi-purpose decontamination boats,** embarked on-board the Manta at the rear, that will access narrow and shallow areas where maneuverability is limited to collect plastic pollution and hydrocarbons.

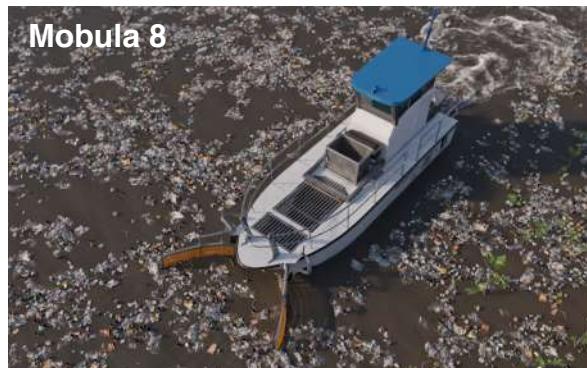
The **Mobula 8** will be deployed in calm and protected waters, such as port or lake areas, rivers, etc.

The **Mobula 10** will be deployed in coastal waters up to 5 nautical miles from the coast, rivers and streams with strong currents, etc.

Each Mobula has a storage capacity of 5 to 10 m<sup>3</sup>.

The Mobula 8 and Mobula 10 are co-developed with the French SME EFINOR Sea Cleaner) and will be launched, separately from the Manta, from 2021.

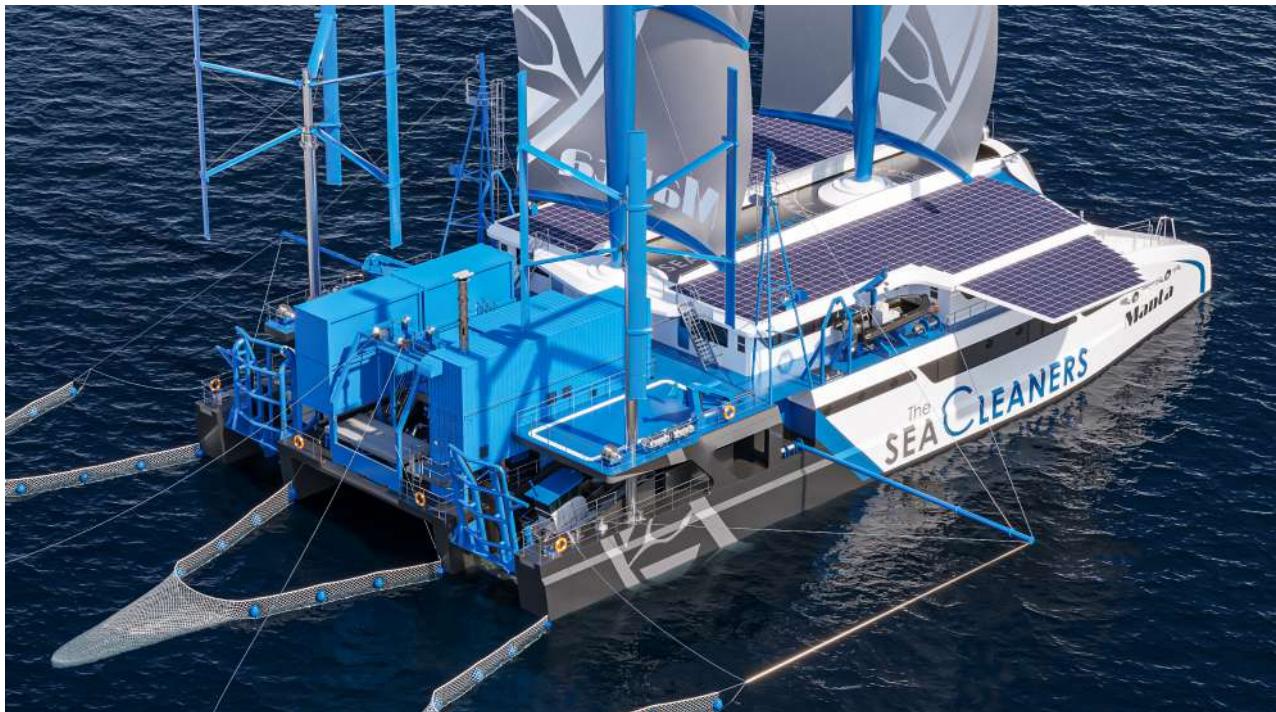
Both models will be sold to encourage public and private initiatives to clean up plastic pollution.



## INNOVATIVE

**Three floatables collection system** - One central and two lateral towed by two outriggers on each side of the Manta. They give the Manta a collection span of 46 meters and a collection depth of one meter, for maximum efficiency in the collection of floating waste, without harming marine fauna and flora.

**Two cranes** located on the main working deck on either side of the ship extract large debris. For their operation, divers can intervene from a tender boat.



**In order to be as efficient as possible during the collection missions,** The SeaCleaners are partnering with academic partners to create technologies and mathematical models that geolocate the layers of pollution and their drift in the sea.

**Each mission will last up to 3 weeks.** It will be followed by a week ashore to unload the collected waste that has not been transformed into energy, to entrust it to local recycling circuits, to refuel the boat and carry out campaigns to raise awareness and promote the transition to a circular economy.

---

**The Manta will be in operation 300 days per year.**

**Collection operations will take place 7 days per week, 20 hours per day: 10 hours of collection during daylight using the conveyer belts and 10h with floatables collection system at night in coastal areas when the environment permits.**

## THE MANTA'S ON-BOARD REPURPOSING PLANT: EVERYTHING IS RECOVERED, NOTHING IS WASTED

*The Manta will be the world's largest floating plant operating autonomously at 75% without using fossil fuels. All the while the Manta will handle 100% of the plastic pollution collected.*

After being brought on board, the waste is taken to the sorting unit where operators separate it manually according to its nature. Metal, glass or aluminium waste is stored for return to shore and recycling in local waste management channels. Organic matter, such as wood and algae, is returned to the water, respecting the marine fauna and flora. Plastic waste is shredded and compacted to increase their energy efficiency, before feeding the Waste-to-Electricity Conversion Unit.

The focal point is the **Waste-to-Electricity Conversion Unit**, named **WECU**, that will convert plastic into electricity, thereby powering all the electrical equipment (cockpit, navigational instruments, batteries, power units and the plant itself) on-board the Manta.

The heat and toxic emissions released by this process are **recovered** to meet thermal requirements and maintain a minimum environmental footprint.

The solid carbon residues which represent 5 to 10 % of the treated plastic, will be stored and distributed to recycling management services on land to produce products, such as bitumen, cement, and fuel.

The conversion process was selected because everything collected and processed on-board will be converted into a useful component. **The simple principle - nothing will be wasted – is upheld.**

**The priority is to convert plastic into usable energy rather than storage**, which increases the weight of the sailboat and therefore its energy consumption.



SORTING UNIT

WASTE PREPARATION  
ZONE



## ACT WHERE IT'S URGENT

***The Manta is the only deep-sea vessel capable of traversing the oceans nonstop, to intervene rapidly anywhere in the world and address areas polluted following natural or climate disasters.***

**THE MANTA WILL BE THE ONLY MOBILE DECONTAMINATION SOLUTION IN THE WORLD WITH MAXIMAL MANOEUVRABILITY.**

### THE MANTA WILL BE ABLE TO INTERVENE TO:

**Endemic polluted areas:** an ocean-going vessel, capable of crossing the oceans non-stop, the Manta will, above all, have a coastal action.

To be efficient, it will intervene in coastal areas where the concentration of waste is the densest, i.e. in the estuaries or mouths of the most polluted and polluting rivers.

Well established studies indicate that 80% of marine pollution begins on land and enters the water ways that lead to the oceans.

Between 0,41 et 4 million tons of pollution present in the oceans come from rivers. According to researchers, 88% to 95% of the pollution originates from 10 of the most polluted rivers in the world, mainly in Asia and Africa.

**Areas ravaged by natural disasters:** hurricanes and tsunamis cause massive inflows of pollution into the ocean. It's imperative that this pollution is dealt with quickly before it drifts, disperses, sinks and becomes irrecoverable.

The only sailing ship in the world capable of being entrusted with this kind of mission, the Manta will, therefore, prove beneficial to respond rapidly in response to natural or climatic disasters.

Areas of intervention will be targeted through satellite images obtained by collaborative partners, and through exploratory missions carried out by the association. The SeaCleaners will also rely on data provided by the goodwill of other specialized associations and organizations supporting clean-up efforts.



\*Lebreton, L., van der Zwart, J., Damsteeg, JW. et al. River plastic emissions to the world's oceans. *Nat Commun* 8, 15611 (2017)

## THE MANTA:

**AND EXCEPTIONAL, ECOFRIENDLY SAILBOAT, OPERATING AUTONOMOUSLY AT 75% WITHOUT FOSSIL FUELS - AN UNPRECEDENTED TECHNOLOGICAL FEAT.**

***Factory boat, ambassador ship, all-in-one plastic decontamination, extraordinary catamaran... the Manta is the epitome of an ecofriendly sailboat.***

### A sailboat, above all

The Manta's preferred propulsion mode will be its sails and rigs, minimizing its energy consumption, its carbon footprint and its operating costs. It will maintain a high level of energy autonomy and will function 75% of the time without fossil fuels, thus becoming the first workboat with such a high level of energy autonomy.

### A custom-made hybrid propulsion

Because some of its missions require low speeds, the Manta's hybrid propulsion system allows movement at low speeds (between 2 and 3 knots) while maintaining maneuverability. An optimal way to combine propeller propulsion units driven by electric motors and automated rigs, equipped with a very large sail area (over 1,500 m<sup>2</sup>). The latter are improved Dynarig rigs, specially designed to reduce the energy bill and the ecological footprint of sailing yachts.

### On-board renewable energies: 500 kW in total

The Manta will be equipped with on-board renewable resources that will supply electricity. The goal is to increase self-sufficiency with minimal environmental impact and reduce consumption of fossil fuels.

- Two wind turbines, located at the stern, will generate up to 100 kW of electricity;
- Nearly 500 m<sup>2</sup> of photovoltaic solar panels, installed at the bow, will generate approximately 100 kWp (kilowatt-peak) of electricity.

Two-thirds of the panels will be installed on a fixed surface, one-third of the panels will be located on retractable wings. These wings render the appearance of the ray, hence the name the Manta.

- Two hydro-generator, located under the vessel, will generate up to 100 kW by means of their rotors when the boat is under sail propulsion.
- The Waste-to-Electricity Conversion Unit will generate up to 100 kW

In accordance with international regulatory requirements, the Manta is also fitted with two diesel engines to ensure low-speed maneuvering and ensure safety of the crew.

### An upstanding and ecofriendly waste-to-energy conversion system

The Manta's principles of energy management are efficiency and simplicity. The selected device consolidates these principles and is the cleanest and most ecofriendly technology available for processing and recovering plastic waste. The toxic emissions released by this process are treated by an innovative filtration system, thereby, minimizing CO<sub>2</sub> and other pollutant into the air. This filtration system conforms to the strictest standards of the European regulatory requirements. It is the cleanest and most environmentally friendly technology for processing and recovering collected plastic waste, with very low external emissions. In this sense, the waste-to-energy conversion unit meets the principles of sobriety and efficiency in energy management on board the Manta.

## An eco-designed sailboat

A complete **Life Cycle Analysis (LCA)** was carried out to access the best design choices for the Manta and to determine the best materials to be used based on their durability, viability, decomposition timelines, recyclability and lowest carbon footprint to produce.

To uphold the principle of energy efficiency, attention was focused on obtaining the best balance of materials and their weights for the Manta. Thus:

- We have reduced the size of the Manta in order to reduce its mass and limit the amount of raw materials used in the construction of the hull and superstructure, as their extraction has considerable environmental impacts.

- The Waste-to-Electricity Conversion Unit (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 emissions by approximately 87%.



### **3 years of research and development to optimise the Manta**

In 2018, the Manta Innovation\* coalesced a technical consortium of 58 engineers, technicians and researchers, 5 research laboratories, and 17 external partners and subcontractors to work together in the research, development, detailed design and embedded technologies of the Manta, in particular:

- To optimise maneuverability
- To reduce energy costs
- To increase the sailboat's ability to traverse anywhere and simultaneously collect plastic pollution efficiently
- To integrate new collection methods
- To integrate educational, scientific and demonstration aspects
- To develop a virtuous energy recovery unit for plastic waste

### **Among the latest advances in the project are:**

- The Mobula - two multi-service boats, secured on-board the Manta, that will access narrow and shallow areas where maneuverability is limited;
- An improved design reducing in drag from the floatables collection system, lowering the consumption of energy and improving the efficiency in collection of plastic pollution;
- Increased maneuverability of the Manta to closely approach the coastline while collecting and processing plastic pollution;
- The novel system is the cleanest and most ecofriendly technology to convert plastic into energy.

\*Manta Innovation is a division of The SeaCleaners, a Simplified Joint Stock Company (SAS) dedicated to the development of innovative technological solutions for marine pollution control.



# THE PROGRAM UP TO 2024

→ 2019

- Completion of the technical feasibility study
- Field tests for the collection carousel systems
- Organization of R&D projects
- Preliminary design studies
- Selection of the Manta's equipment

→ 2020

- Detailed design studies
- System selection
- Start of shipyard consultation
- Specifications for the choice of ship architects

→ 2021

- First collection campaigns with Mobulas
- Exploratory expeditions to determine the Manta's initial zones of activity
- Manta's systems integration studies
- Final selection of Manta's equipment
- End of shipyard consultation

→ 2022

- Logistics preparation for the Manta's operations
- Selection of shipyard
- Detail Design of the Manta
- System procurement
- **The Manta's construction starts**

→ 2023

- Systems integration
- Stand alone commissioning of all systems
- Integration of systems into the ship
- **End of construction of the Manta**

→ 2024

- Launching, tests and commissioning of the Manta
- **First field mission for the Manta**

# OCEAN PLASTIC POLLUTION, A CATASTROPHIC SCENE



If we do not act, in 2050, the ocean will contain more plastic than fish.

Each year, between **9 to 12 million tons** of plastic are dumped into the ocean.

Every minute, **17 tons** of plastic are dumped in the ocean.

Poor plastic waste manage is the source of ocean plastic pollution:

- Industrial production of plastic began in the **1950s**.
- In 70 years, **9 billion tons** of plastic were produced - **1 ton per person**.
- In 2020, the global plastic production peaked at **380 million tons**, equivalent to the weight of the entire human population.
- We consume almost three times more plastic than 25 years ago, **200 times more than in 1950**.
- More than **half the plastics** in the world have been manufactured since the year 2020.
- If the current trend continues, plastic production **will double by 250 times**, reaching 760 million tons.

- There is no sign of slowing down. Recent investments in plastic factories are expected to increase plastic production **by 40% in the near term**.
- Only **5%** of the plastic produced since 1950 have been recycled.
- **6,5 billion tons** of plastic produced since 1950 are in the environment - equivalent to 25 gigatons of CO<sub>2</sub>.
- **53 %** of the plastic produced in the world still reaches the natural environment.

According to the recent « Breaking the Plastic Wave » report from the PEW Charitable Trusts et SYSTEMIQ (July 2020):

- Humans throw **three times more garbage** in the ocean than they catch fish.
- At this rate, without ambitious measures, the amount of plastic present in the oceans **will triple in the next 20 years**.
- If the current trend continues, the amount of plastic waste polluting the oceans will reach **29 million tons per year by 2040**, the equivalent of **50 kg for every meter of coastline in the world**.

## **Plastic pollution is a global ecological disaster:**

- **1,5 million animals** die each year because of plastic pollution (source IRD)
- **More than 100,000 marine mammals** die each year (source UNESCO)
- **1 million birds** die each year (source UNESCO)
- **14,000 species** are impacted ( source WWF)
- **A quarter of seabird deaths** are linked to plastic consumption (source UNESCO)
- **30% of fish and 90% of marine birds** have ingested plastic during their life cycle (source IRD)
- The cost of plastic pollution is estimated at **13 billion euros** (source PNUE)
- In 2018, the United Nations Environment Program place the issue of ocean plastic pollution **among the six most serious environmental emergencies.**

## **And for humans?**

- We ingest or inhale around **11,000 plastic micro-particles each year** through our food, our water consumption or by breathing, with an impact on our health that is still little known.



## LE MANTA: THE FLAGSHIP PROJECT OF THE SEACLEANERS

*Created in 2016 by the Franco-Swiss navigator and explorer, Yvan Bourgnon, the NGO, The SeaCleaners combats plastic pollution, at sea and on land, through corrective and preventative missions.*

### AT SEA

We collect dense areas of macro-plastic pollution before it sinks or disintegrates into micro-plastics.

We contribute to scientific research - results and data collected will be available in an "open data" platform.

### ON EARTH

We raise awareness and educate the general public in an effort to reduce the problem.

We engage teams of volunteers to carry out pollution clean-up operations.

We lead by example and demonstrate the affordability and efficiencies of technological solutions.

**The SeaCleaners is organised in divisions of expertise:**

sponsorship, volunteers, science, education, communication, field work and technical.

**The development of the Manta** itself, and the manufacture of the decontamination solutions, are in the hands of the Manta Innovation (SAS) structure, which heads the technical consortium bringing together some twenty companies that are partners in the project.

**The SeaCleaners is committed** to more than just an innovative operational solution. Its vision for the preservation of the oceans is global, long-term and global in scope. It integrates economic, societal, human, educational and scientific perspectives in a spirit of solidarity.

**Oceans represent more than 70% of the Earth's surface and contain 97% of its water.** The oceans are essential: oceans supply oxygen to the atmosphere, regulate climate, nurture us, feed us, heal us, protect us, transport us, encourage us to travel, are our playground, are an endless source of inspiration. Preserving the oceans are a priority.

**The SeaCleaners is an observing member of the UN Environment; is supported by the Albert II of Monaco Foundation and the CCI France International network; is aligned with several international alliances and working groups: The Group of Friends to Combat Marine Plastic Pollution, and partner of the United Nations Decade of Ocean Sciences for Sustainable Development.**

# THEY STAND BY OUR SIDE

## Consortium:

Waste-to-energy unit:



Automatic rigs:



Collection systems:



On-board energy management system:



Collection boats (MOBULAs):



Naval architecture:



Life Cycle Analysis /  
Technical-economic studies:



Hydrogenerators:



## Corporate Sponsors:



### Fonds de dotation Picoty

A complete list of corporate sponsors is available at [www.theseacleaners.org](http://www.theseacleaners.org)



# **YVAN BOURGNON**

## **A champion moved to fight a great cause**



Since childhood, Yvan Bourgnon has loved the sea. He was 8 years old when he accompanied his parents for four years sailing around the world. **Adventurer, champion and record-holding navigator, he saw the oceans deteriorate before his eyes, degraded by plastic pollution.**

During trans-atlantic competitions, Yvan Bourgnon often collided with containers or unidentified floating objects (UFOs) - in 2015, he was forced to abandon the Transat Jacques Vabre because his sailboat struck an UFO in the bay of Gascogne – making him aware of the increase of plastic pollution. In his years of navigation around the world, he was shocked by the increase of pollution floating in the oceans.

In his solo world tours sailing a sport catamaran, he was stunned to discover the idyllic, wild and natural places become places of discarded trash, plastic debris and junk.

**Greatly responsible for this situation? Plastics, a human invention that only dates back to the 1950s.**

Upon his return to France, he decided to take action and conceived The SeaCleaners and the Manta project.

**Yvan Bourgnon, outstanding track record.** Over time, Yvan Bourgnon has accomplished impressive records on performance sailboats and in sport multi-hull and off-shore races (Route du Rhum, Québec-Saint-Malo...). In 1997, Yvan and his older brother, Laurent Bourgnon, won the Transat Jacques Vabre.

**He holds multiple world sailing records,** and of recent, has taken sailing to an extreme by embarking on a series of unprecedented solo adventures.

From October 2013 to June 2015, his first solo tour world tour on a 6.30 m sports catamaran without living quarters, without assistance, without GPS, only using a sextant and paper navigational charts. This ‘astronavigational’ world tour was sailed in 20 stages, lasted 20 months with 55,000 km logged at the finish.

On September 22, 2017, **Yvan Bourgnon became the first to sail solo from Alaska to Greenland** aboard his sport catamaran without living quarters, as before, without assistance or GPS, only using astronavigation. The documentary “Conquérant des glaces », show this superhuman feat: 70 days navigating 4,500 nautical miles among the Arctic ice and glaciers in the Northwest Passage (released March 2020 – 60 minutes).

**These remarkable achievements are recognized worldwide.**

Yvan Bourgnon still participates in sailing competitions and world championships, especially with his son, Mathis Bourgnon.

Yvan also co-authored a book with Christian Bex entitled, “ Fils de la mer, une vie d'aventure », released in March 2020 by Arthaud editions.

# CONTACTS

## The SeaCleaners:

Valérie Amant:  
Director of communications  
[v.amant@theseacleaners.org](mailto:v.amant@theseacleaners.org)  
+33 6 83 37 66 21

Elise d'Epenoux:  
International communication manager  
[e.depenoux@theseacleaners.org](mailto:e.depenoux@theseacleaners.org)  
+33 6 79 17 43 49

#BeatPlasticPollution  
#MantaProject  
#PlasticHunter

[www.theseacleaners.org](http://www.theseacleaners.org)  
