

# MAPP INDONESIA

by



## MOBULA AGAINST PLASTIC POLLUTION

---

### COMBATTING PLASTIC POLLUTION ON LAND AND IN WATERS

Initiated by the non-profit NGO The SeaCleaners, the MAPP Indonesia project unites several Indonesian partner organizations to implement clean-up operations in Bali inland waters and on-land activities designed to combat plastic pollution, in collaboration with local authorities, organizations and community.

**The MAPP project is implemented with guidance from the Indonesian Government, in the framework of a Memorandum of Understanding signed in July 2022 with the Ministry of Maritime Sovereignty and Energy coordinating Maritime Affairs and Investment of the Republic of Indonesia (Kemenko Marves).**

## IMPACT OF THE MAPP INDONESIA PROJECT



- 1 REDUCING MARINE PLASTIC POLLUTION**  
*By collecting waste, education & awareness raising.*
- 2 STIMULATING INNOVATION**  
*By providing technology, capacity building, and knowledge sharing.*
- 3 INCREASING LOCAL COMMUNITY RESILIENCE**  
*By fostering a better environment that allows natural resources to grow well, and supporting the livelihoods of the local community.*
- 4 REDUCING PRESSURE ON THE ENVIRONMENT**  
*By moving towards circular economy, reducing and repurposing the waste, better management hence less threat to the environment.*

## MEET THE MOBULA 8

**At the core of MAPP Indonesia is the MOBULA 8, the multi-purpose clean-up boat developed by The SeaCleaners.**

- Capable of cleaning up 15,000 sqm per hour, 18 km<sup>2</sup> per year
- Collects both solid and liquid waste
- Designed to operate in rivers, mangrove swamps and lake areas, canals and coastal areas up to 6 nautical miles from the coasts
- Able to collect up 2.4 tons of solid waste and 600 liters of liquid waste per rotation



- 4 m wide collection span, thanks to the concentrator arms installed at the front of the boat
- A true autonomous waste recovery station
- Equipped with an on-board sorting table for continuous waste sorting in real time
- Easily transportable on land by truck or in a container by shipping boat
- Operated by one boat captain and by one or two sorting operators

*\*Built by Efinor Sea Cleaner*



# THE MAPP INDONESIA'S PROGRAM

## OPERATIONS

### 1. CLEANING

#### Floating waste collection at sea and on rivers by MOBULA 8

With the Mobula 8, The SeaCleaners acts upstream by collecting waste in rivers, estuaries and near ports. The latter are strategic areas of intervention because different waste streams are located in their vicinity, namely river waste, shipping waste and land-based waste from surrounding towns and villages.

### 2. PROCESSING

#### Management of waste collected by MOBULA 8

The waste is brought back to land at specific locations. Each type is categorized and weighed. Waste is then transported to a facility to be further sorted according to their end-use. Recyclable materials are sent to local industrial plants to re-enter the economy. Waste management and recycling remain critical to solving plastic pollution. Residual waste that cannot be recycled are sent to managed landfills (as little as possible).

---

## 3. PREVENTING

### Education and awareness raising activities

Spectacular clean-ups by the MOBULA 8 provide opportunities to organize awareness raising campaigns about plastic pollution. This strategy is paired with efforts to reduce plastic waste as its source and as part of a larger move toward a circular economy. To achieve that, local and international partners and The SeaCleaners volunteers conduct educational activities, school visits and clean-up days, in the nearby locations where the boat operates.

Together with Indonesian stakeholders, our teams develop educational tools and materials tailored to the local context to raise awareness about the importance of preserving the Ocean, explain the impact of plastic pollution, and spread solutions to change towards an eco-lifestyle.

---

## 4. UNDERSTANDING

### Scientific missions

Removing waste from the water goes hand in hand with data collection.

Local researchers, supported by the international scientific advisory board of The SeaCleaners, are on board to work on the characterisation of the macro-waste collected, on land and at sea, as well as on the sampling of micro-plastics.

The SeaCleaners has also partnered with CLS (Collecte Localisation Satellite), a global pioneer in Earth observation. CLS provides data on monitoring and modelling of marine plastic waste drift in Indonesian waters and expertise in locating polluted marine areas in Indonesia.

The Mobula 8 will contribute to the “Eyes on Plastic” program which will create a new tool based on Earth Observation (EO) technologies. This ESA-project will help observe coasts and rivers in a multi-source approach – from satellite to on-site cameras. A dedicated WebApp will inform on floating plastic debris in real-time and on marine pollution in general. This shall empower governmental stakeholders, NGOs, other decision makers and the public to effective and data-based activities against aquatic plastic. By this, EOMAP, The SeaCleaners and the other project partners wish to contribute to SDG 14.

---

## 5. IMPROVING ON-LAND WASTE MANAGEMENT

### Assistance to local communities in rural areas

On the field, local NGOs are active and vocal to develop tailored waste management projects, such as garbage collection, sorting of recyclable/residual materials, development of upcycling...

The SeaCleaners provides financial and technical support to these actors in order to improve waste collection and sorting facilities which play a critical role in reducing ocean plastic pollution in the long-run. Our teams purchase equipment, provide technical assistance through studies (with the support of private partner VALORPLAST), train key stakeholders and raise awareness among local communities to enable sustainable development of the area in the field of waste management.

# WHERE DO WE OPERATE?

## Coastal and water-based operations

**The Benoa Bay in the Denpasar region (Bali) which includes :**

- The mangrove forest
- Benoa Port
- Waters under the Bali Toll Route

## On-land operations

Rural areas in Gili Trawangan and Amed area.



**The MOBULA 8 will be stationed** where the collected waste will be stored, weighed and categorized for public information and scientific purposes, before being picked up by our waste management partner for further processing.

**As the MOBULA 8 can be moved by land to operate in other locations, further operations will be decided following the depollution priorities and the needs expressed by local authorities.**

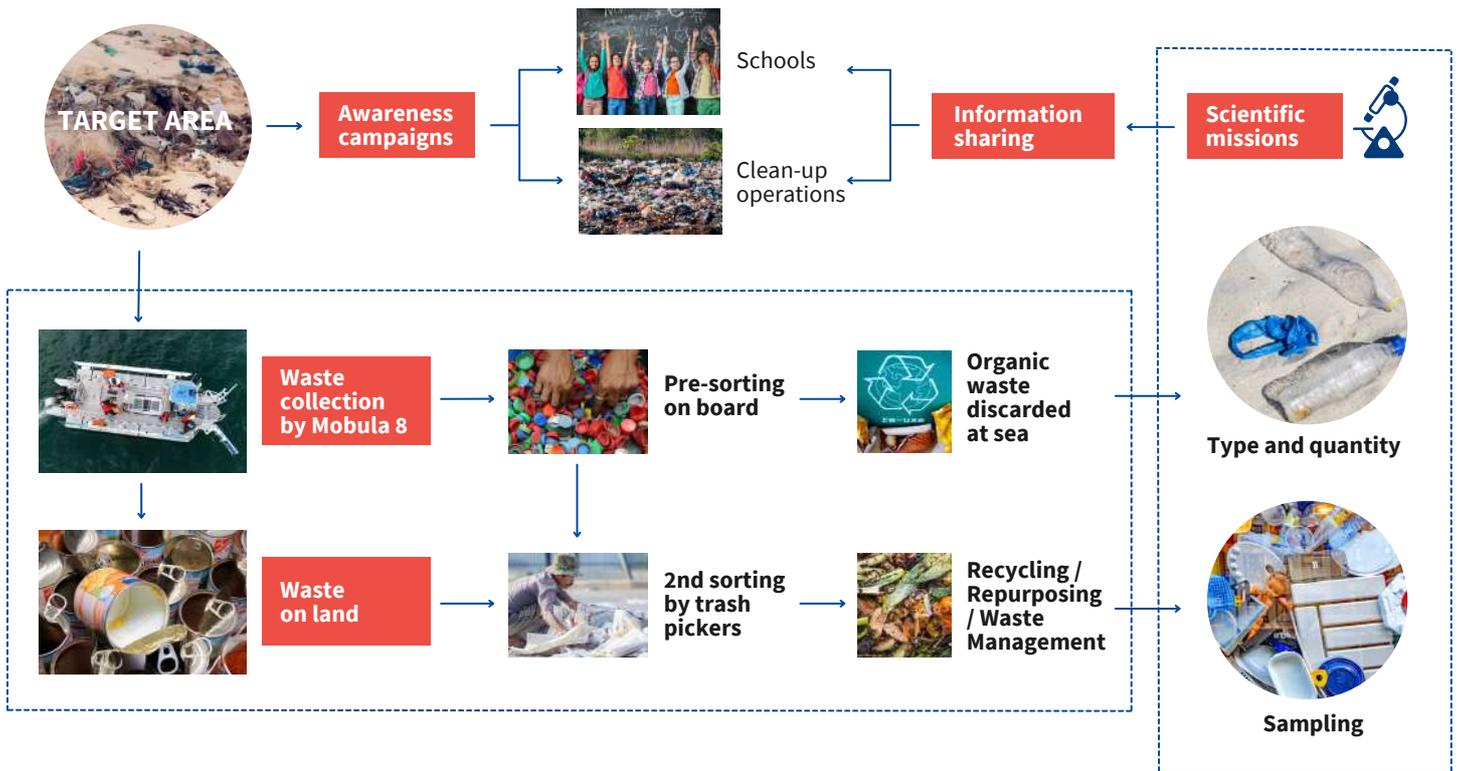
## OTHER POTENTIAL OPERATION ZONES



## TIMETABLE

- ✓ **The MOBULA 8 will begin operations in Bali in the first semester of 2023.**
- ✓ **It will be stationed in Bali for minimum 6 months.**
- ✓ **It will operate 5 days per week, 7 hours per day.**

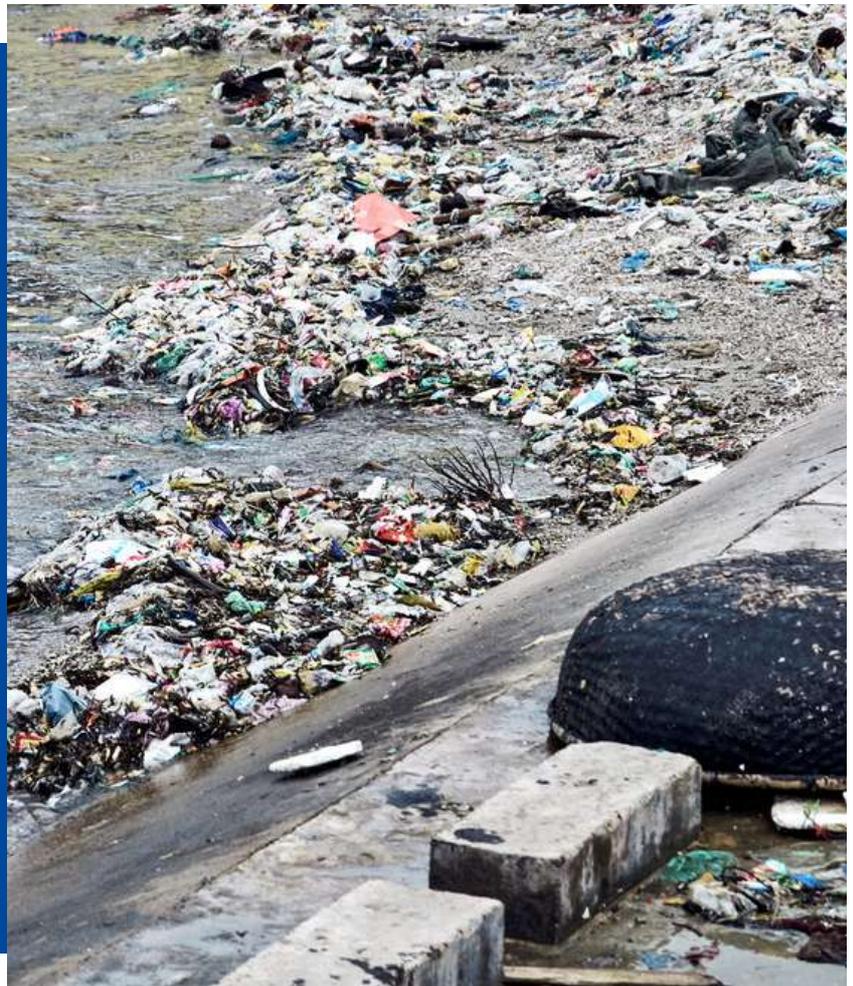
# WHAT IS OUR APPROACH?



## THE COLOSSAL CHALLENGE OF PLASTIC POLLUTION IN INDONESIA

- 200,000 tons of plastic waste are dumped into the ocean from Indonesia's rivers and streams [1].
- Major threats to the mangrove ecosystem, marine biodiversity, local tourism and fish industry are a direct consequence of this pollution.

[1] <https://www.danone.com/stories/articles-list/aqua-plastic-pledge.html>, accessed Sept 28th, 2021.



## SITUATION IN BALI & DENPASAR

Despite being more advanced in implementing policies to ban plastic bags, Bali, the center of Indonesian tourism, is one of the regions that is still struggling with plastic pollution.

90% of the inhabitants in Bali live less than a kilometer from one of the 372 rivers that irrigate the island. This water network is an incredible wealth for vegetation and agriculture. Unfortunately, it is also an ideal means of transport for plastic waste... According to the organization Sungai Watch, about **33,000 tons of plastic enter Bali's rivers every year, that is to say about 90 tons per day.**

In Denpasar alone, the capital city of Bali, 4% of the waste generated every day are mismanaged.

**2,308 tons per year of plastics leak to the aquatic environment every year [4].**

[3] [Sungai Watch data](#)

[4] Bali Partnership's research and interactive map 2020



## TACKLING THE ISSUE

The Government of Indonesia has set up an ambitious goal of reducing waste production by 30% and marine plastic pollution by 70% by 2025, in the framework of the “National Policy & Strategy on Management of Household Waste and Household-like Waste”.

In parallel, an increasing number of organizations from civil society are joining forces to create a Plastic Free Movement, in order to reduce plastic dumping in the environment and increase the awareness of local communities.

**The MAPP project is embedded in this framework through a Memorandum of Understanding signed in July 2022 with the Ministry of Maritime Sovereignty and Energy coordinating Maritime Affairs and Investment (Kemenko Marves).**

# PROJECTS UNDERWAY OR ALREADY IMPLEMENTED



## CLEAN-UPS IN BALI

**In May 2022**, in Bali, The SeaCleaners and its local partners organised a mangrove clean-up in Tanjung Benoa. We cleaned 1,200 m<sup>2</sup> of mangrove collecting 125 kg of waste.

On the occasion of Bali's biggest clean-up **in February 2023**, in collaboration with the Natar Sari temple and its community, 500 kilos of waste were collected and awareness-raising and education activities were carried out with the youngest ones.



## INDONESIA-FRANCE BILATERAL MEETINGS IN BALI

**In May 2022**, the Coordinating Ministry for Maritime Affairs and Investments of the Republic of Indonesia, in collaboration with the French Embassy in Indonesia and East Timor, organised two days of bilateral discussions between Indonesia and France. The French Embassy invited The SeaCleaners to take part in this high-level event.



## WASTE CLEAN-UP AT SEA WITH THE INDONESIAN NAVY IN JAKARTA

**In September 2022**, the Indonesian Navy officially launched the National Movement for a Clean Sea, which brings together many public authorities and institutions. The kick-off was spectacular: nothing less than the largest waste collection operation at sea in the country's history, taking place simultaneously on 77 sites throughout Indonesia, including in small islands! The SeaCleaners was honored to be invited to this event.



## CLEAN-UP WITH SUNGAI WATCH

**In September 2022**, we joined forces and took part in the clean-up of the mangrove of Denpasar with the NGO Sungai Watch. Founded in 2020 by Gary, Kelly and Sam Benchehghib in Bali, Sungai Watch works every day to create solutions to stop the flow of plastic pollution from going into the ocean. They are on a mission to install 1,000 barriers by the end of 2023.



## IN JAKARTA, THE INDOWASTE TRADE SHOW

In October 2022, 550 exhibitors from 30 countries presented their latest innovations in waste collection, recycling and disposal services, as well as energy generation from waste.

The SeaCleaners was there to introduce its operations in Indonesia.



## IMPROVING WASTE MANAGEMENT WITH GILI ECO TRUST

Since September 2022, The SeaCleaners is supporting Gili Eco Trust, an association based in Gili Trawangan that operates in the field of waste collection and treatment on the island. This project is based on 3 main missions: improving the existing sorting centre with our sponsor Valorplast, improving the management of residual waste and financing collection and awareness tools.



## IMPROVING WASTE MANAGEMENT WITH WITH PEDULI ALAM

Since September 2022, The SeaCleaners supports the local communities in the rural area of Amed to improve waste management with the local association Peduli Alam. The SeaCleaners provides financial and technical support to projects already underway. In particular, we will equip the area with new bins to achieve efficient collection, to develop a sorting centre with the help of our sponsor Valorplast and to raise awareness.



## BALINESE SCIENCE FESTIVAL

In January 2023, The SeaCleaners has joined forces with the French Institute of Indonesia and the France Alliance Bali to create the first Balinese Science Festival! More than 70 international and Indonesian students were able to learn about the problem of plastic pollution, its negative impacts and its solutions.



## THE SEACLEANERS: PROJECT LEADER / INITIATOR

Created in 2016 by Franco-Swiss skipper Yvan Bourgnon, The SeaCleaners is a non-profit organization acting for the long-term conservation of the oceans and the reduction of marine plastic pollution.

### It develops actions both at sea and on land:

- Collecting floating plastic waste in high concentration areas before it sinks or breaks down into microplastics.
- Contributing to scientific knowledge through research and open data sharing.
- Alleviating the problem at its source through education and public awareness initiatives and carrying out waste collection operations with teams of volunteers.
- Supporting the transition to a circular economy by developing and demonstrating innovative and eco-friendly technological solutions.

The SeaCleaners' iconic project is the MANTA, a giant sailboat designed to combat oceanic plastic pollution set to be launched in 2025.

For more information, please visit [www.theseacleaners.org](http://www.theseacleaners.org)



# THE MAPP INDONESIA TEAM & PARTNER ORGANIZATIONS

## Ministry of Maritime Sovereignty and Energy coordinating Maritime Affairs and Investment of the Republic of Indonesia (Kemenko Marves).

Kemenkomarves is one of our most valuable supporters in Indonesia.



KEMENTERIAN KOORDINATOR BIDANG KEMARITIMAN DAN INVESTASI

[website](#)

## Rotary 3420

Our awareness partners to trigger long term behavioural changes in the fight against plastic pollution.



[website](#)

## Bali Marine Service

Operation partner for the Mobula 8.



Bali Marine Service

[website](#)

## Gili Eco Trust

## Peduli Alam

Gili Eco Trust and Peduli Alam will benefit from The SeaCleaners' technical assistance to improve the existing waste management facilities.



GILI ECO TRUST

[website](#)



Peduli Alam

[website](#)

## France Alliance Bali

## French Institute

A natural partnership with these two entities to activate awareness and education actions in French and Indonesian.



Alliance Française  
Bali

[website](#)



Liberté  
Créativité  
Diversité

[website](#)

## CLS (Collecte Localisation Satellite)

A major partner for The SeaCleaners, CLS is a pioneer in providing Earth observation since 1986. Its vision is to imagine and deploy innovative solutions to understand and protect our planet and manage its resources sustainably.



COLLECTE LOCALISATION SATELLITES

[website](#)

## Eyes on plastic

The Mobula 8 will contribute to the ESA-project "Eyes on Plastic" which will create a new tool based on Earth Observation technologies, to contribute to SDG 14.



eyes on plastic

[website](#)

## UDAYANA university

Our main scientific partner for research on plastic pollution.



[website](#)

## CCI Indonesia

IFCCI gathers the French and Indonesian business communities with the objective of developing bilateral professional contacts.



IFCCI  
CCI FRANCE INDONESIE  
INDONESIAN FRENCH CHAMBER

[website](#)

## Valorplast

A pioneer company in the recycling of household plastic packaging.



VALORPLAST

[website](#)

## French Embassy

An essential and priceless support for The SeaCleaners.



AMBASSADE  
DE FRANCE  
EN INDONÉSIE  
ET AU TIMOR  
ORIENTAL

Liberté  
Égalité  
Fraternité

[website](#)

## Efinor Sea Cleaner

Efinor Sea Cleaner is the manufacturer of the Mobula 8. A shipyard and an expert in multi-service pollution control vessels, Efinor Sea Cleaner detains innovative patented technology. The crew of the Mobula 8 is trained jointly by Efinor Sea Cleaner and The SeaCleaners.



ÉFINOR

[website](#)

# WANT TO HEAR MORE?



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



## PLEASE CONTACT



### **ANTOINE ICHÉ**

Project Coordinator  
+ 33 7 78 68 10 70 (WA)  
[a.iche@theseacleaners.org](mailto:a.iche@theseacleaners.org)



### **KETUT SUDARWATA**

Field Officer  
The SeaCleaners Indonesia  
+62 8 12 38 11 17 (WA)  
[k.sudarwata@theseacleaners.org](mailto:k.sudarwata@theseacleaners.org)

