

## SITES

About **40 archipelagos** will be systematically analyzed and compared to identify the differences and similarities between coral colonies.

**10 sites** will be the subject of targeted studies on specific local issues.

## VARIOUS SAMPLING TECHNIQUES

### ON REEFS

- Manual collection of coral fragments
- Core sampling
- Photographic recording of sampling sites and the studied species *in situ*
- Sampling of seawater and surrounding microorganisms (bacteria and viruses)
- Genomic analysis (DNA / RNA) of samples

### AROUND AND BETWEEN REEFS

- Measurement of temperature and biochemical parameters of seawater (salinity, turbidity, etc.)
- Continuous characterization of surface water during navigation between reefs

## BEYOND RESEARCH

During the voyage around the Pacific, besides conducting scientific research, Tara will be an advocate for ocean governance. The Tara Pacific expedition will be an occasion to make appeals to politicians and the business world, and raise general awareness about the most urgent environmental issues, including problems specifically confronting the populations of Pacific islands.

## FOLLOW TARA

#TARAPACIFIC



tara  
PACIFIC

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EXPEDITION 2016 - 2018



# tara PACIFIC

THE BIODIVERSITY OF CORAL REEFS  
FACING CLIMATE CHANGE

MALPELO - EASTER ISLAND - FRENCH POLYNESIA - COOK ISLANDS  
SAMOA - WALLIS & FUTUNA - KIRIBATI - MICRONESIA - MARIANA ISLANDS  
JAPAN - TAIWAN - FIJI - NEW ZEALAND - NEW CALEDONIA - PAPUA NEW GUINEA  
PALAU - PHILIPPINES - CHINA - HONG KONG - SOUTH KOREA



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# TARA EXPEDITIONS FOUNDATION

The Tara Expeditions Foundation organizes scientific research missions aboard the legendary schooner Tara to study and understand the impacts of climate change and the ecological crisis on our oceans. These expeditions are conducted in collaboration with international laboratories and scientific institutions.

Tara Expeditions aims to strengthen environmental awareness among the general public and young people. The Foundation also works to mobilize society and encourage decision makers to move forward in developing the solutions we need to assure the good health of our planet.

## BASIC FACTS

10 expeditions conducted between 2003 and 2015  
350,000 kilometers traveled by the schooner Tara since 2003  
4 missions: research / awareness / advocacy / education  
3 orientations: Ocean & Climate / Ocean & Biodiversity / Ocean & Mankind

## CLOSE-UP ON THE SCHOONER

**Name:** TARA  
**Birthdate:** 1989  
**Length:** 36 meters  
**Width:** 10 meters  
**Weight:** 120 tons  
**Function :** scientific research vessel

## TARA PACIFIC IN NUMBERS

- 11<sup>th</sup> Tara expedition since 2003
- 30 countries to be visited
- 70 stopovers
- 2 ½ years of navigation
- 100,000 kilometers traveled
- 70 scientists from 8 countries aboard
- 26 laboratories and research institutes participating
- 200 sampling sites
- 40,000 samples collected
- 40 archipelagos systematically analyzed & compared
- 10 sites targeted for study of specific local issues
- 11 time zones traversed
- 6 sailors and 7 scientists continually on board
- 8 artists-in-residence aboard over 2-year period

# TARA PACIFIC EXPEDITION 2016 - 2018



Tara will traverse the Pacific Ocean, voyaging nearly 100,000 km for more than 2 years. On board, an international, multidisciplinary team of scientists coordinated by the CNRS and the Scientific Centre of Monaco (CSM). Our goal is to collect the necessary data to compare in a new way the biodiversity of coral reefs and their evolution as they confront climate change.

Coral reefs cover less than 0.2% of the ocean floor, but include nearly 30% of known marine biodiversity. Their health is crucial for the many different species they shelter, but also for mankind. A large number of reefs have been dying in recent years. Studying this fragile and endangered ecosystem is now a priority!



## KEY NUMBERS ON CORAL REEFS

Home to 30% of known marine biodiversity, they cover less than 0.2% of the ocean floor. 57,557 km<sup>2</sup> of reefs are situated in French territory. The value of services provided by coral reefs is estimated at 30 billion dollars per year. 46% of reefs are in good health. 20% of reefs have been destroyed. 35% of reefs are facing extinction.

## 4 RESEARCH ORIENTATIONS

- Studying the state of health of coral reefs in the context of climate change.
- Identifying the biodiversity of coral reefs, from genes to the entire ecosystem.
- Exploring the capacity of resistance, adaptation and resilience of reefs.
- Contributing to the development of applications for tomorrow's medical research.