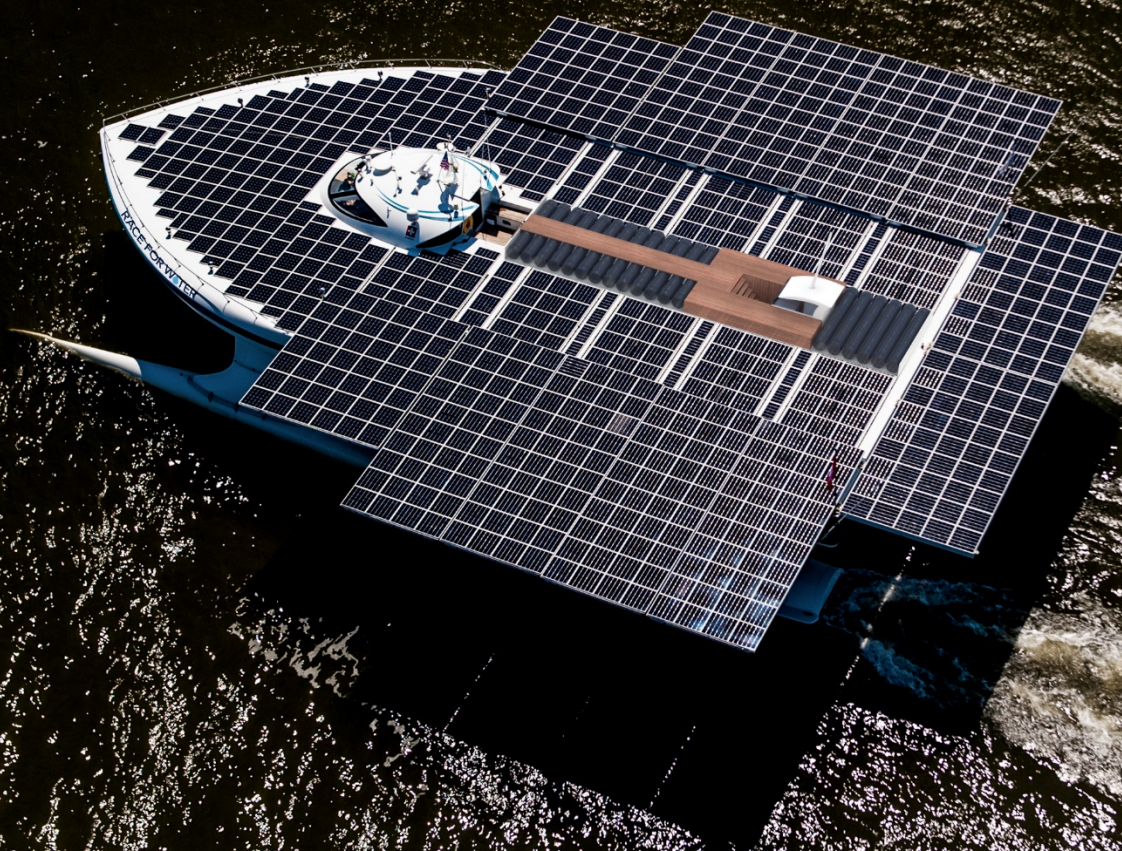


# RACE FOR WATER ODYSSEY 2017-2021

A pioneering vessel, a crucial mission for the oceans



SCIENTIFIC  
PARTNERSHIP

RACE FOR  
WATER

UNE FONDATION  
POUR PRÉSERVER  
L'EAU



# Race for Water

continuing its commitment  
with a 5-year expedition around the world  
dedicated to science and energy transition,  
using the ocean, the sun and the wind  
as its sole sources of energy.



## Goals

Conduct scientific studies  
supporting the preservation of our oceans

Act, raise awareness and promote  
new solutions to fight plastic pollution  
in the oceans

Promote “Clean-Tech” innovations



A scientific platform dedicated to your research studies  
in the marine environment





# THE RACE FOR WATER VESSEL

## A SCIENTIFIC PLATFORM DEDICATED TO RESEARCH STUDIES



Race for Water, the foundation's ambassador vessel, is a unique scientific platform adapted to scientific expeditions; self-sufficient thanks to solar energy coupled with the production of hydrogen for **an 100% environmentally friendly expedition.**

Thanks to her large workspaces, her stability and her energy self-sufficiency, this vessel can accommodate **several scientific and oceanographic research topics.**

### Platform's strengths:

- **silent navigation** (interesting when observing marine life)
- **low-speed navigation** - 3 to 5knots (adapted to measuring process)
- **no interference when sampling** (no fuel rejection)

### Large flexible workspace for scientific work:

- **Two direct access to the sea** from the deck at the back of the vessel: easy access for sampling
- **More than 90m<sup>2</sup>** of flexible workspace
- **Wet laboratory** and a hoist (optional) for collecting samples at sea and for a direct treatment in immediate proximity
- **Air-conditioned dry laboratory** on board, fitted out with a fridge, a freezer and possibility of a heat chamber (optional)
- **Large common workspace** with equipped workstation
- Stairs with a platform that can get 2 divers

**Wifi connection on board via a high-speed satellite connection**

**She is also an amazing communication and promotion tool whatever its destination.**





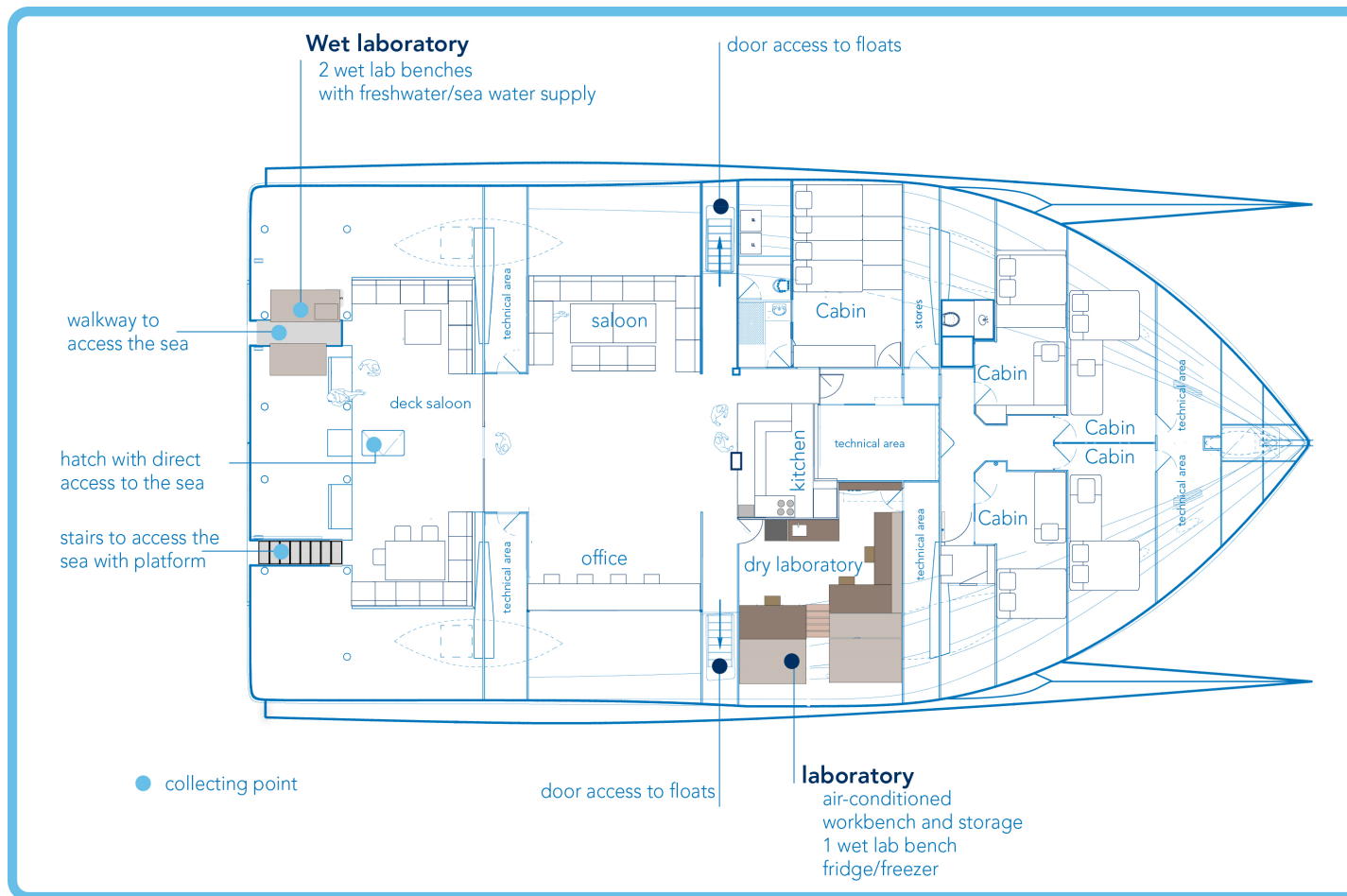
# THE RACE FOR WATER VESSEL

## A SCIENTIFIC PLATFORM DEDICATED TO RESEARCH STUDIES



This vessel has been entirely reorganised this year to allow optimal working conditions.

She can host a scientific team of 5 to 7 people



### Other equipment on board

- one 4.5m-40hp tender
- 3 equipments for divers (wetsuits + diving blocks)

### System & maritime navigation software

- Meteo France's BATOS station
- High definition GPS tracking
- Sea water temperature measuring tool



# THE RACE FOR WATER VESSEL

## A RECOGNISED SCIENTIFIC PLATFORM



Formerly known as “Planet Solar”, this platform has already hosted different expeditions including two scientific expeditions in 2013 and 2014:



**2010-2012: First solar boat to sail around the world (60,000 km)**

A 584-day circumnavigation across the Atlantic Ocean, the Panama Canal, the Pacific Ocean, the Indian Ocean, the Gulf of Aden, the Suez Canal and the Mediterranean Sea. 52 stopovers to promote the use of solar energy.



**2013: “Planet Solar Deepwater” Expedition in the Atlantic Ocean to study the Gulf Stream’s current**

The mission led by professor and climatologist Martin Beniston from the University of Geneva (UNIGE), was to analyse the processes at the Gulf Stream ocean-atmosphere interface that are involved in climate regulation. Thanks to Planet Solar’s special features, the scientific team collected a series of physical and biological measurements in the water and in the air.



**2014: “Terra Submersa” Expedition to study and to explore prehistoric remains submerged in the Mediterranean**

An archaeological mission initiated by the University of Geneva, that covered over 9,000 km and 8 stopovers – many of which were in Greece. The vessel equipped with high-definition bathymetry instruments, crisscrossed the Kiladha Bay in the Gulf of Nafplio in order to identify any traces of human activity there.



# WORDS FROM THE SCIENTISTS

## "PLANET SOLAR DEEP WATER" EXPEDITION



### Prof. Martin Beniston

Director, Institute for Environmental Sciences (ISE), University of Geneva

Vice-president of the "Impacts" group in the IPCC (Intergovernmental Panel on Climate Change, co-recipient of the 2007 Nobel Peace Prize)

Leader of the "PlanetSolar DeepWater" Expedition in 2013 along the Gulf Stream

*"The Solar Vessel enables to gather unique data, particularly on the aerosols (micro droplets and micro particles injected in the atmosphere by the ocean sprays, which plays a substantial role in the climate regulation) thanks to the absence of chimney. Indeed, the size and composition of the aerosols is similar to those of the pollutants emitted from the traditional heavy fuel combustion of conventional boat i.e. it is difficult to separate what comes from natural sources and what comes from human sources. The "PlanetSolar DeepWater" Expedition run by Geneva University in the North Atlantic Ocean during the summer of 2013 took largely advantage of this capacity to sample non-contaminated data."*





# WORDS FROM THE SCIENTISTS

## "TERRA SUBMERSA 2014" EXPEDITION



### Prof. Julien Beck

Professor, University of Geneva

Scientist during the "Terra Submersa 2014" Expedition

*"As the scientific leader of the "Terra Submersa" Expedition in 2014, I must say that the boat turned out to be the ideal platform for research and communication. In terms of research, we needed to use different types of geophysical measuring instruments, such as sonars and sub-bottom profilers. On the Solar Vessel, the scientific equipment was installed on the rear deck, as the measuring instruments were towed from the stern. The geophysicists in charge of research thus particularly enjoyed the abundance of space on board, the silent engines, and the ship's capacity to manoeuvre in shallow waters. Regarding the communication part, the boat proved once again to be an amazing tool: in each and every Greek port of call, the public was immediately attracted to her. Visits were organized on board, which included a presentation of the type of research carried out during the Terra Submersa Expedition."*





# PROVISIONAL ROUTE

BE PART OF THIS EXPEDITION TO WORK IN STRATEGIC ZONES

RACE FOR  
WATER  
ODYSSEY

FAVOURABLE SAILING ZONE 9 MONTHS PER YEAR



## 1. CARRIBEAN / EAST PACIFIC ZONE

### POTENTIAL STOPOVERS

Necker Island  
Bermuda  
Bahamas  
Cuba  
Guadeloupe  
Miami  
Los Angeles  
San Francisco

France

Mediterranean Sea

## 3. MIDDLE EAST / MEDITERRANEAN ZONE

### POTENTIAL STOPOVERS

Thuwal (Saudi Arabia)  
Djibouti  
Oman  
Abu Dhabi  
Doha  
Dubai  
India

DUBAI

Red Sea

Gulf of Oman



## 2. NORTH PACIFIC / ASIA ZONE

### POTENTIAL STOPOVERS

Shanghai  
Tokyo  
Hong Kong  
Koror

TOKYO

South China Sea

Bay of Bengal

2017

2018

2019

2020

2021

CARRIBEAN / EAST PACIFIC ZONE

NORTH PACIFIC / ASIA ZONE

MIDDLE EAST / MEDITERRANEAN ZONE

Bermuda - America's Cup  
May > June 2017

Scientific Expeditions  
in the Pacific

Tokyo - Olympic Games  
July > August 2020

Dubai - Universal Exhibition  
October 2020 > April 2021



# RACE FOR WATER ODYSSEY

## EXPEDITION 1: SCIENTIFIC INTERESTS IN CARIBBEAN / EAST PACIFIC



### BERMUDA ZONE:

**Sargasso Sea** (invasive algae, marine pollution (plastics and pollutants), climate change, marine biodiversity/plankton, eel migration, etc.)

**Caribbean Sea** (marine pollution (plastics and pollutants), climate change, ocean acidification, coral reefs, etc.)

**Gulf of Mexico** (marine pollution (especially hydrocarbon), marine biodiversity, etc.)

### CALIFORNIA ZONE:

#### **Gulf of California (or Sea of Cortez)**

A UNESCO marine world heritage site

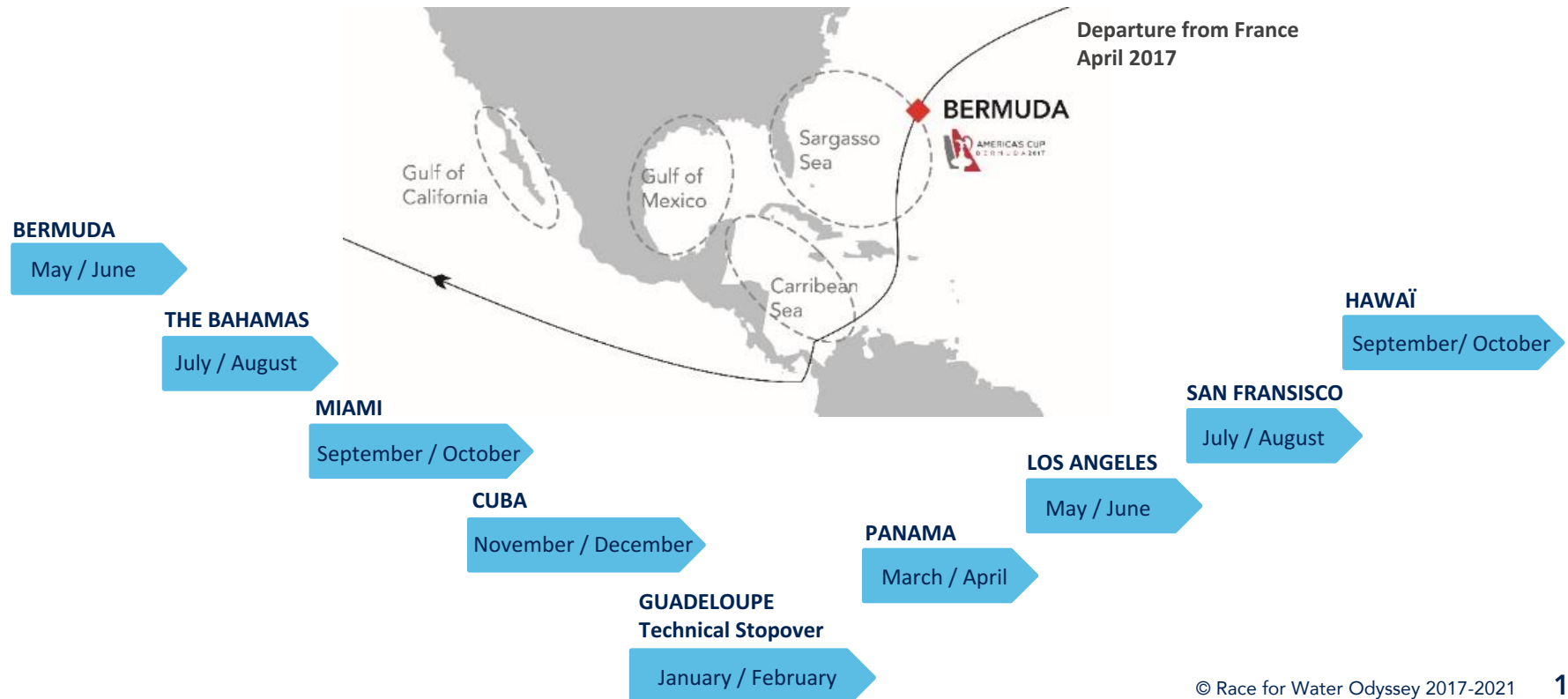
891 fish species, 90 endemic

1/3 of the world's marine mammal species

(marine biodiversity, marine mammals, marine pollution (plastics and pollutants), climate change, marine and coastal processes, etc.)

2017

2018





# RACE FOR WATER ODYSSEY

## EXPEDITION 2: SCIENTIFIC INTERESTS IN NORTH PACIFIC / ASIA



### NORTH PACIFIC ZONE

The largest marine masses on Earth  
166 million km<sup>2</sup>  
(climate change, ocean acidification, plastic pollution, marine biodiversity, marine ecosystem dynamics, etc.)

### SOUTH CHINA SEA ZONE

**South China Sea**  
(plastic pollution (microplastics), bio geochemistry, bathymetry, sedimentology, etc.)

### BAY OF BENGAL ZONE

**Bay of Bengal**  
Located between India and Burma, it received several of the largest Asia's rivers (Gange, Krishna et Godavari)  
→ low salinity  
(bathymetry, sedimentology, geochemistry, mineralogy, granulometry, organic composition, isotopic evolution, marine resources, plastic pollution, etc.)

2019

2020

Planned stopover:  
TOKYO  
SHANGHAI  
HONG KONG  
KOROR





# RACE FOR WATER ODYSSEY

## EXPEDITION 3: SCIENTIFIC INTERESTS IN MIDDLE EAST ZONE / MEDITERRANEAN



### GULF OF OMAN ZONE

#### Gulf of Oman

Sea influenced by monsoons (climate change, currents and eddies, coastal upwelling, corals, plankton biodiversity, pollution (radioactivity, hydrocarbons, pesticides, heavy metals), etc.)

### RED SEA ZONE

#### Red Sea

(climate change, marine pollution, seabed, coral reefs (coral bleaching), biomass, marine biodiversity, marine ecosystems, etc.)

### MEDITERRANEAN SEA ZONE

#### Mediterranean Sea

(marine pollution (plastics and pollutants), invasive species, marine mammals (Pelagos sanctuary), climate change and ocean acidification, underwater archaeology, canyons, thermohaline circulation, etc.)

2020

2021

Planned stopover:

- INDIA
- OMAN
- ABU DHABI
- DOHA
- DUBAI
- DJIBOUTI
- SAUDI ARABIA (Thuwal)





Win this race for water with us  
Every drop counts.  
Time to dive in!

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

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