Race For Water programs overview

Race for Water Ambassador : An ideal flagship for the Foundation's programs and projects conveying our messages all over the world

Handout
Complete version 2.4

RACE FOR WATER

A Foundation to preserve water

LEARN SHARE ACT

VISION
To preserve water, the most precious resource on earth.

MISSION
Stop the exponential trend of wild plastic waste reaching waterways by developing new social and economic models that gives end-of-life plastics a value.

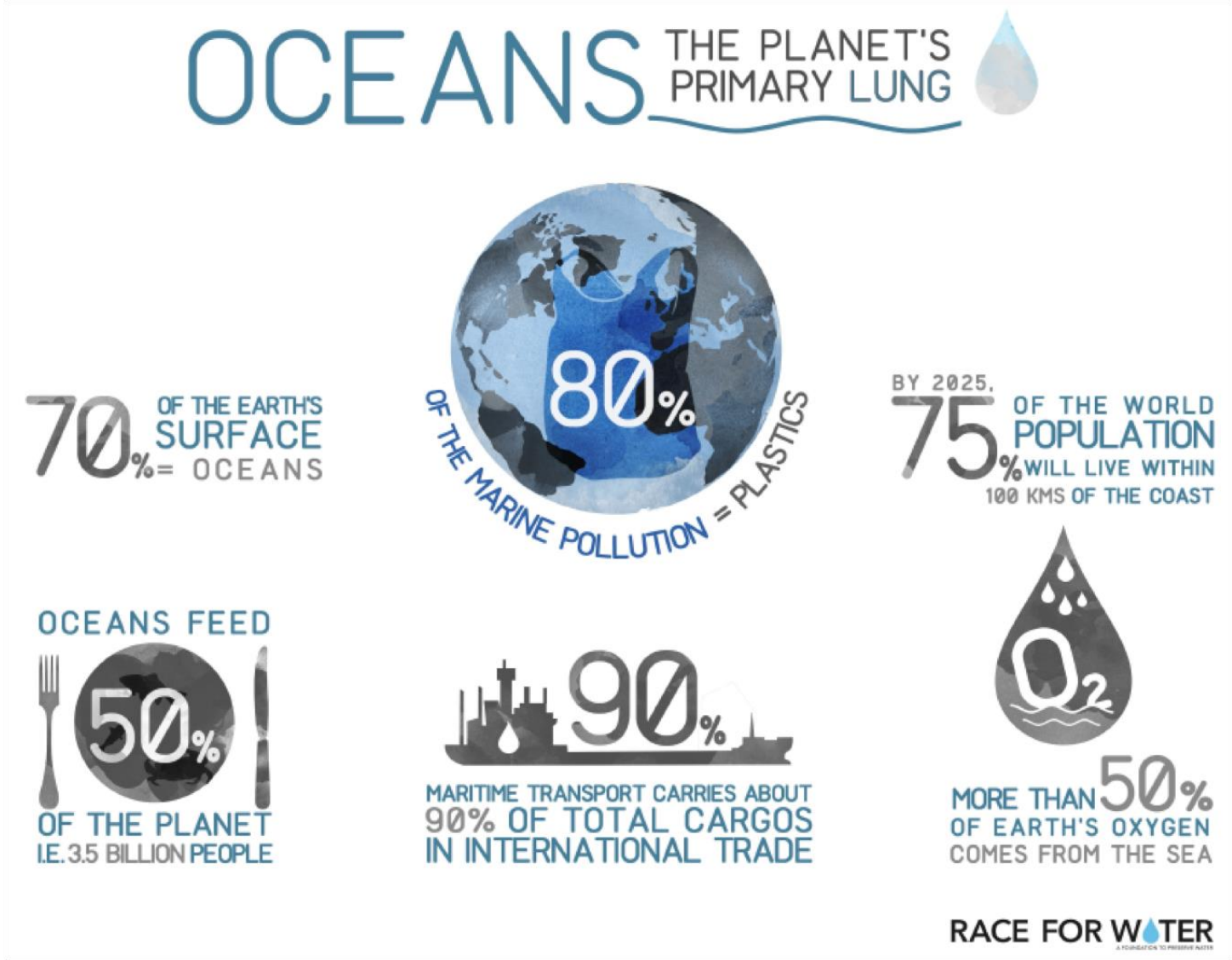
STRATEGIC OBJECTIVES
- **ENVIRONMENTAL** : Reduce the amount of plastic litter reaching the ocean and protect species' life
- **VALUE CREATION** : Identify, promote and help implement solutions that give end-of-life plastics a value through new business streams
- **SOCIAL** : Create new sources of income for the local underprivileged communities affected by plastic pollution

MARKET SEGMENT
Race for Water focuses on islands above 100'000 inhabitants and on large coastal cities above 1'000'000 inhabitants to prevent plastic litter from reaching oceans, lakes and rivers.

ROLES
Keep an active technology intelligence on solutions that give end-of-life plastics a value
Provide financing to local plastic waste-to-energy projects
Provide management consulting services to beneficiaries
Facilitate collaboration between entrepreneurs and local communities
Federate stakeholders in the plastic waste-to-energy sector towards a significant impact

The crucial role of oceans

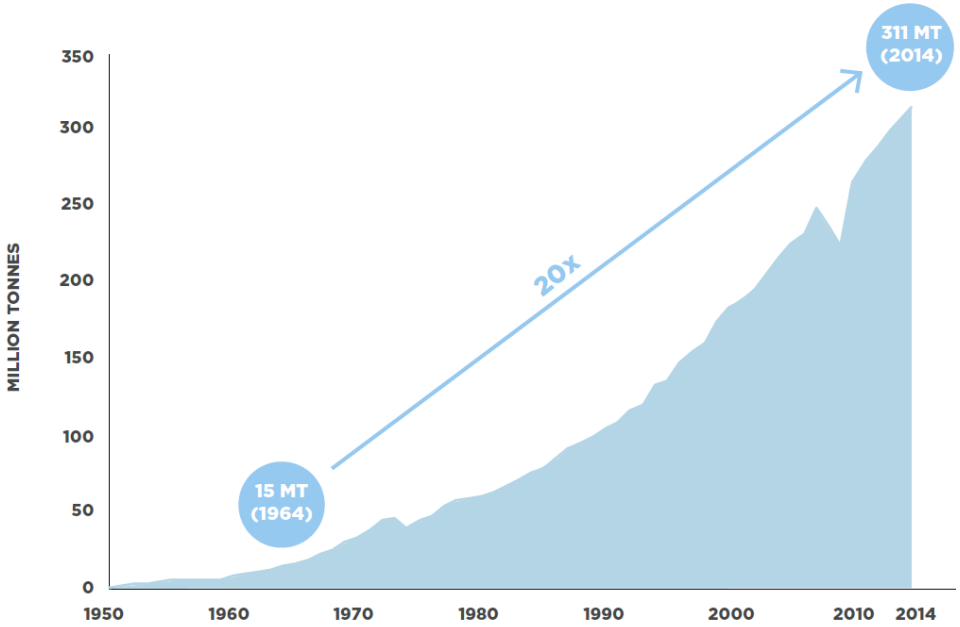
LEARN SHARE ACT

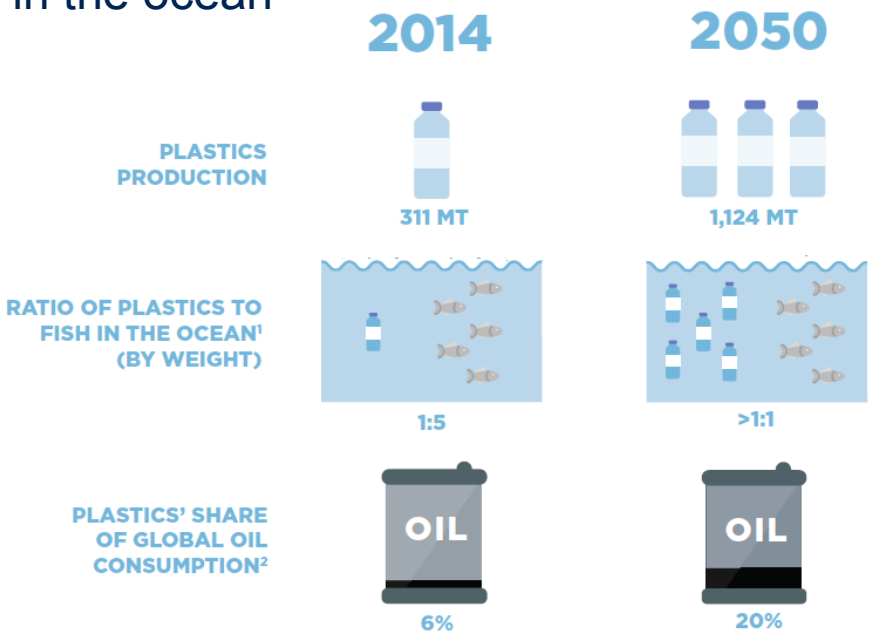


From global plastic production to marine plastic pollution

LEARN SHARE ACT

"By 2050 there will be more plastic than fish in the ocean*"





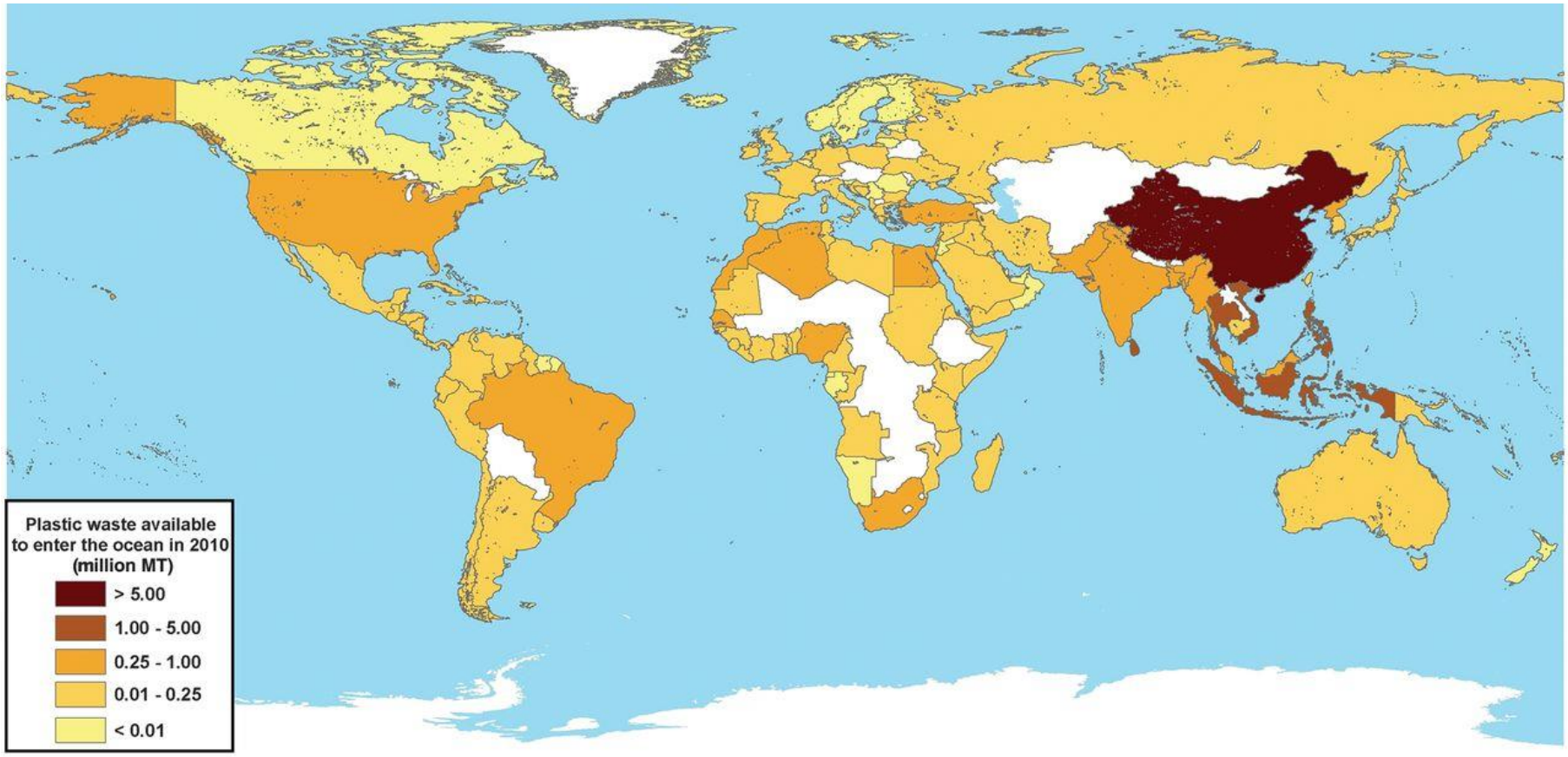
World Economic Forum, Ellen MacArthur Foundation & McKinsey Center for Business and Environment, The New Plastics Economy -Rethinking the future of plastics, 2016
* If no action is taken

/ In 2010, at least 8 million tons of plastics were estimated to leak into the ocean each year – which is equivalent to dumping the contents of one garbage truck into the ocean every minute. The best research currently available estimates that there are over 150 million tons of plastics in the ocean today | World Economic Forum 2015 (Source Jambeck et al., 2015)

/ Plastic pollution causes at least USD 13 billions' worth of damage every year to industries that include fishing, shipping and tourism | UNEP 2014

/ Improving wastewater and solid waste collection and management presents the most urgent short-term solution to reducing plastic inputs, especially in developing economies | UNEP 2016

Plastic waste produced and mismanaged worldwide



Source : Jambeck et al. 2015 - Science

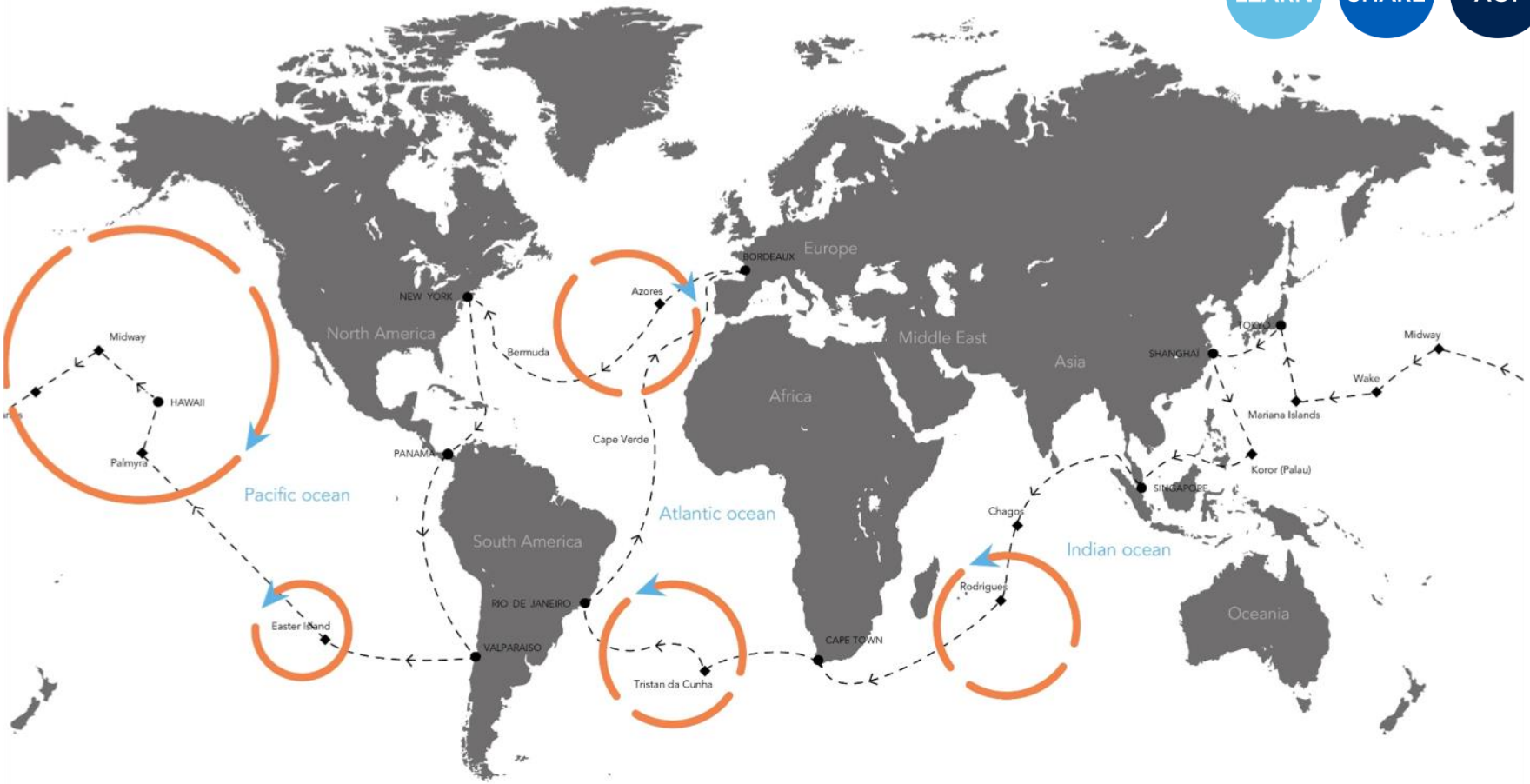
/ 16 of the top 20 contributors to plastic marine litter are middle-income countries, where economic growth is rapidly occurring.

/ The top five countries (China, Indonesia, Philippines, Sri Lanka and Vietnam) account for more than 50% of 'mismanaged' plastics, based on this analysis.

Race for Water Odyssey 2015

Global assessment and outcomes

LEARN SHARE ACT



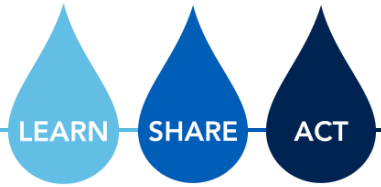
The **Race for Water Odyssey,** our 2015 global assessment of plastic pollution, allowed us to state that:

/ Plastic waste is everywhere

/ There is no 7th continent nor plastic islands but a plastic soup of waste floating in the gyres

/ A grand-scale clean-up of the ocean is unrealistic, land-based solutions are key to be efficient in the fight against plastic pollution in water

Our Program



Since its creation in 2010 and in order to maximize the impact of its actions, Race for Water developed the LEARN – SHARE – ACT program:

*Contribute to the advancement of **scientific knowledge on plastic pollution in water***

***Alert** decision-makers, **raise awareness** among the general public and **educate** younger generations*

*Promote and implement **sustainable solutions with significant social impacts***

Race for Water Ambassador Vessel

An advanced technology,100% energetically self-sufficient

In 2017, the Race for Water vessel will be the first boat 100% energetically self-sufficient, only powered with **solar & hydrogen energy**.

During its 2017-2021 Odyssey program, she will be a unique communication tool to promote our plastic waste to energy solutions at all stopovers and a fabulous platform made available for scientific expedition while at sea.

/ UNIQUE TECHNICAL FEATURES

- 35 meters long, 23 meters wide, 6.30 meters high
- 500 square meters of solar panels
- 360° view from the solar-panel deck
- Zero CO2 emission

/ PRIVATE EVENTS

- Cocktail and receptions
- Work meetings
- Navigation

/ SUPPORTING SCIENTIFIC BODIES/UNIVERSITIES

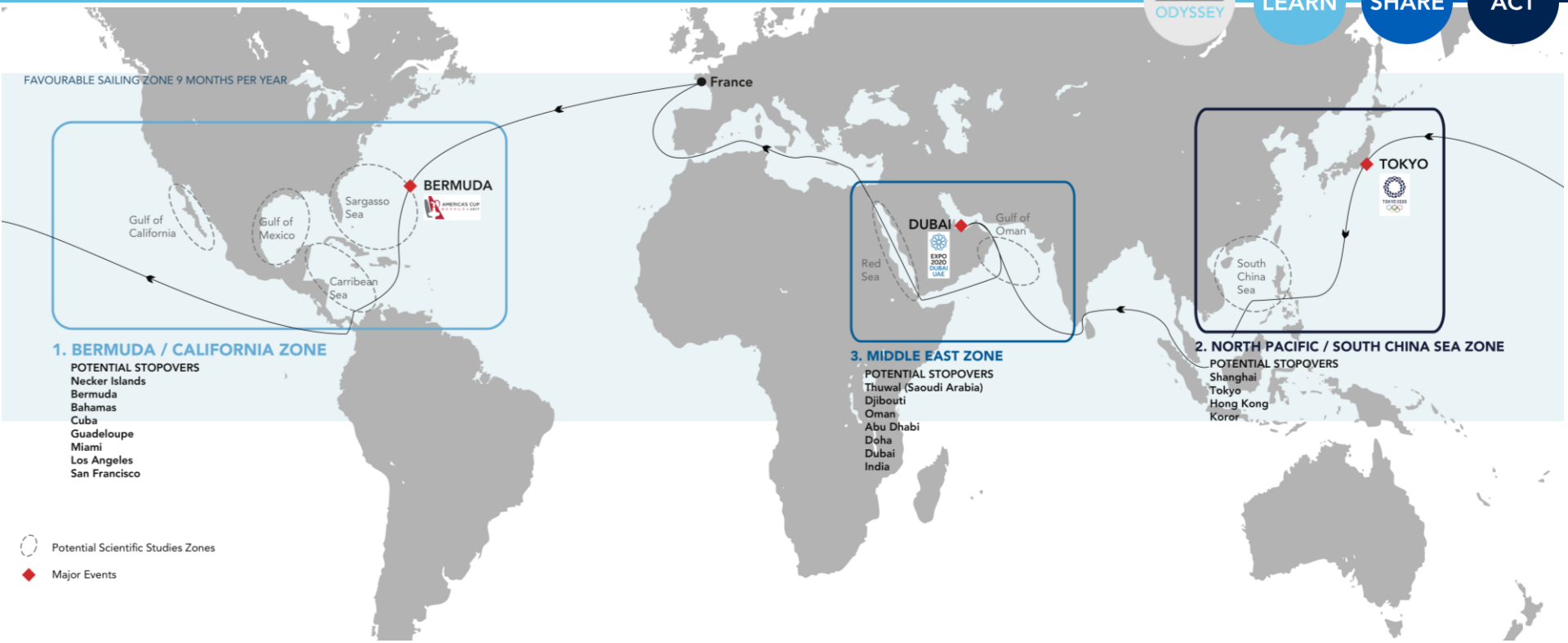
- More than 90m² of modular working space
- Wet and dry laboratories
- Two direct access to the sea for sampling
- Wifi connection on board via a high-speed satellite connection

/ PUBLIC EVENTS

- International conferences
- Exhibitions
- Visits by the general public and schools
- Television studio

Race for Water Odyssey 2017-2021

Provisional route



/ A 5-YEAR EXPEDITION AROUND THE WORLD

Dedicated to the ocean, 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 dedicated presentation about the Race for Water Odyssey 2017-2021 is available upon request.

Act Program : «Plastic waste-to-energy» projects

Because it is urgent to take action, in 2016, we put a strong focus on developing the program ACT. This section will present the Business Model of our plastic waste-to-energy concept.

Action plan

Implement a value chain for plastic waste

ACT

/ Collecting / Remunerating / Processing / Generating energy

/ ENVIRONMENTAL OUTCOMES

- Stop the flow of waste in the streets, in nature and in our oceans
- Protect thousands of species (including humans) from death, illness or injuries
- Preserve zooplankton which produces half our oxygen

/ ECONOMIC VALUE CREATION

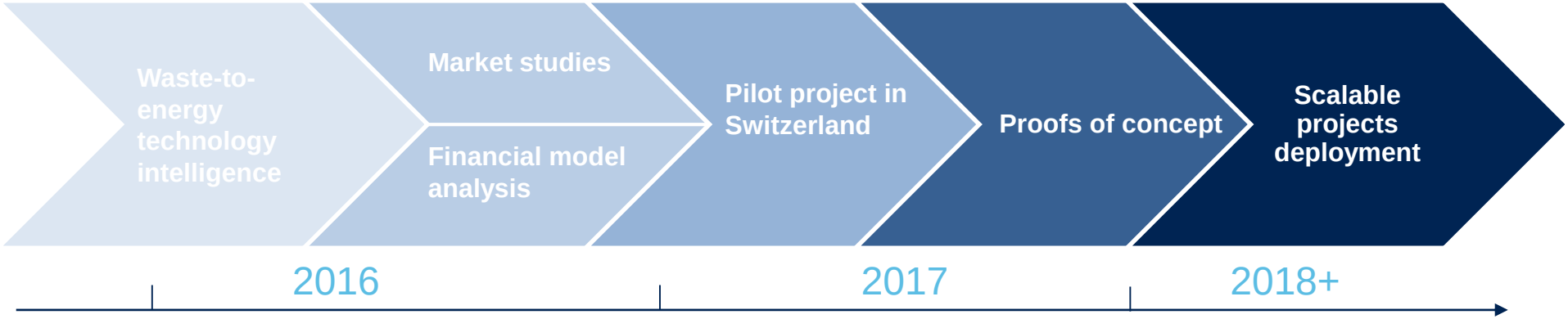
- Provide a cleaner and sustainable source of energy
- Apply a long-term model which stimulates local economies (tourism, fishery)
- Reduce expenditures for local authorities (health, pollution clean-ups)

/ SOCIAL IMPACTS

- Create jobs for thousands of waste collectors to gather plastic waste in the streets
- Provide a better quality of life and health improvement for most vulnerable communities
- Educate people to change behaviors and enhance environmental awareness

Timeline for a global environmental, economical and social impact

ACT



/ WASTE-TO-ENERGY TECHNOLOGY INTELLIGENCE

- Build process mapping methodology
- Identify and study various technologies adapted to our plastic waste to energy model

/ MARKET STUDIES

- Identify key strategic places
- Proceed with pre-assessment surveys on local waste management, energy sector, and existing plastic waste to energy equipment
- Validate the environmental, financial, and social impact projection for each region of focus

/ FINANCIAL MODEL ANALYSIS

- Identify, analyze and focus on the most appropriate financial sources and instruments to build an investment pool for plastic waste to energy projects

/ PILOT PROJECT IN GLAND

- Use our protocol to test the selected technology model in Switzerland and assess its financial, ecological and energy balance
- Showcase to incite the investment community specifically in Switzerland

/ PROOFS OF CONCEPT

- Deploy and monitor our plastic waste to energy value chain in one coastal city and one island
- Showcase our model to launch the scale-up

/ SCALABLE PROJECTS DEPLOYMENT

- Scale the plastic waste to energy value chain in identified key places to reach our environmental, value creation and social strategic objectives targets

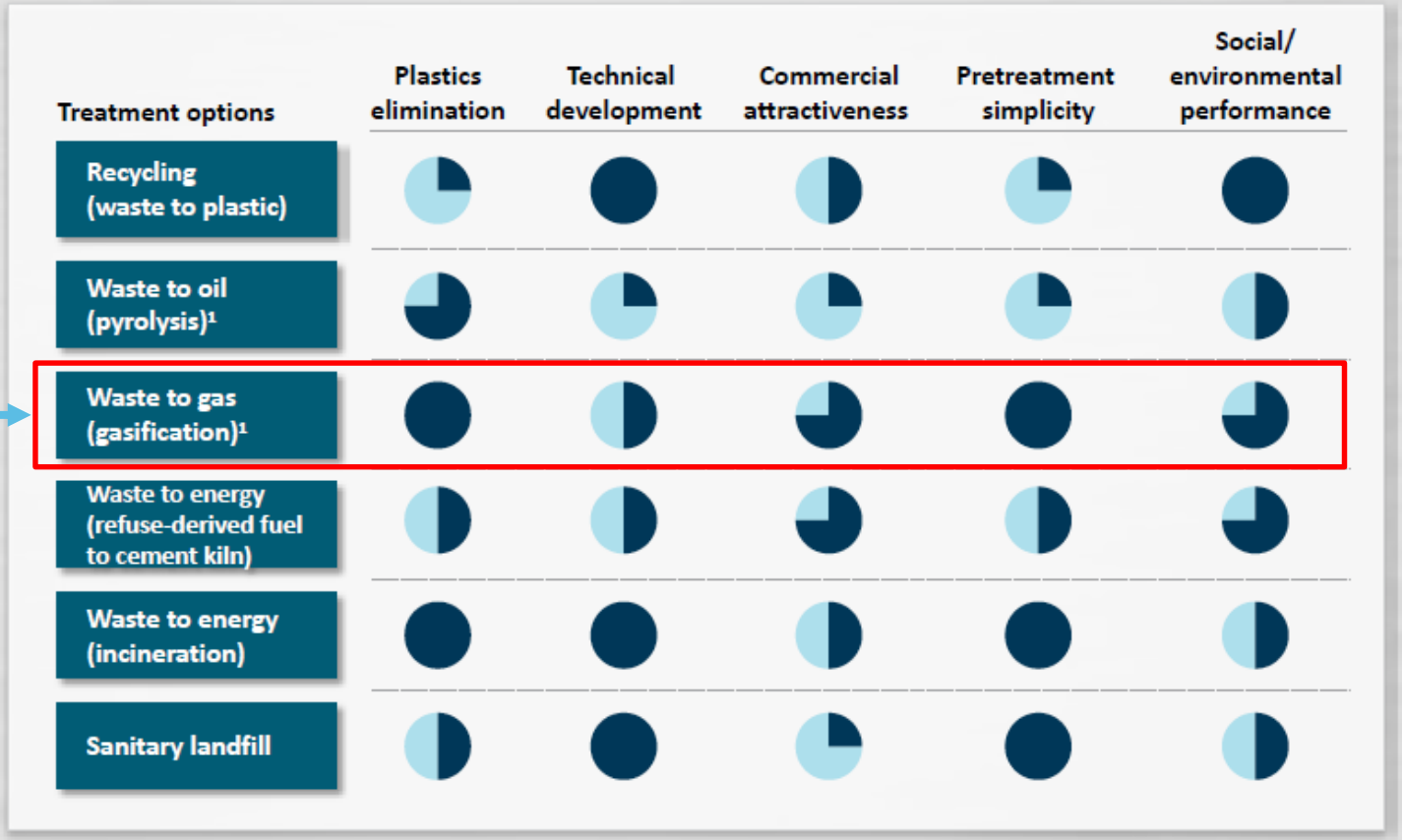
We focus on the most relevant factors

ACT

Waste-to-energy technology intelligence

RACE FOR WATER — A FOUNDATION TO PRESERVE WATER

Each waste-treatment option scored differently with regard to the five factors we analyzed.



1 Other chemical recycling methods are out of scope as they are not economical.

Source: Ocean Conservancy report

From social impacts to economic value

ACT

Waste-to-energy technology intelligence

CREATING JOBS

CREATING ECONOMIC VALUE

Not-for-Profit collect organisation

Innovative waste-to-energy technology

Profitable outputs

/ Collecting

/ Remunerating waste pickers

Our Focus

/ Electricity

/ Other types of energy
- Hydrogen gaz
- Methane gaz
- Ethanol

/ Waste pickers can **collect 25kg of plastic litter per day**

/ A machine that **treats 24T/day** produces **15,000MWh* annually** (equivalent to the average annual electric consumption of **3750 four-person households** with no electric heating systems in Switzerland**)

*Detailed projections available upon request.

**Average annual electric consumption of four-person households with no electric heating systems in Switzerland : 4 MWh/year. Source: Des appareils ménagers efficaces - Fiche d'information du WWF Octobre 2012.

Identified technology : Biogreen® pyrolysis & gazification

Waste-to-energy technology intelligence

Plastic litter

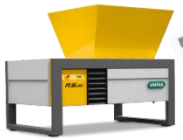
Pellet

syngaz
gaz suitable for energy applications

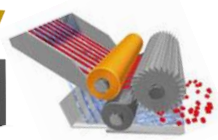
Energy
created electricity & heat can be used for industrial or domestical purposes

Biogreen® pyrolysis
high-temperature thermochemical process performer in the absence of oxygen

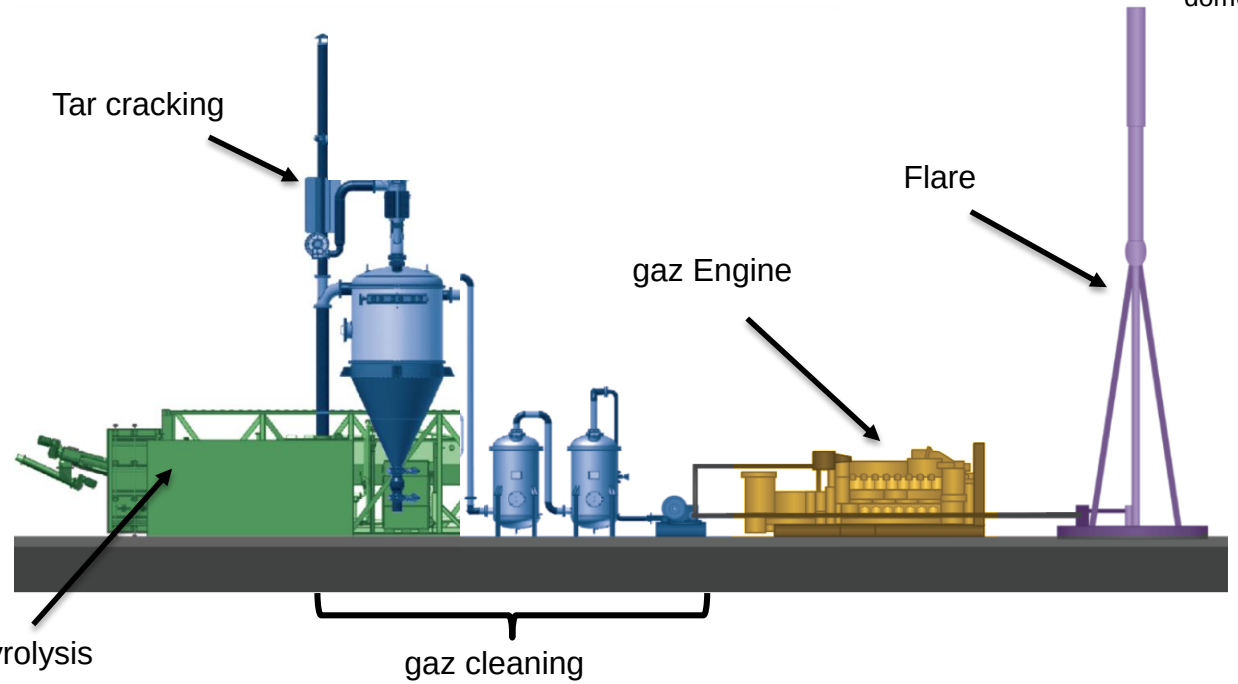
gaz engine
combined heat and power generation



Shredder



Pelletizer



Pilot Project in Gland CH

ACT

Pilot project in Switzerland

/ GOALS

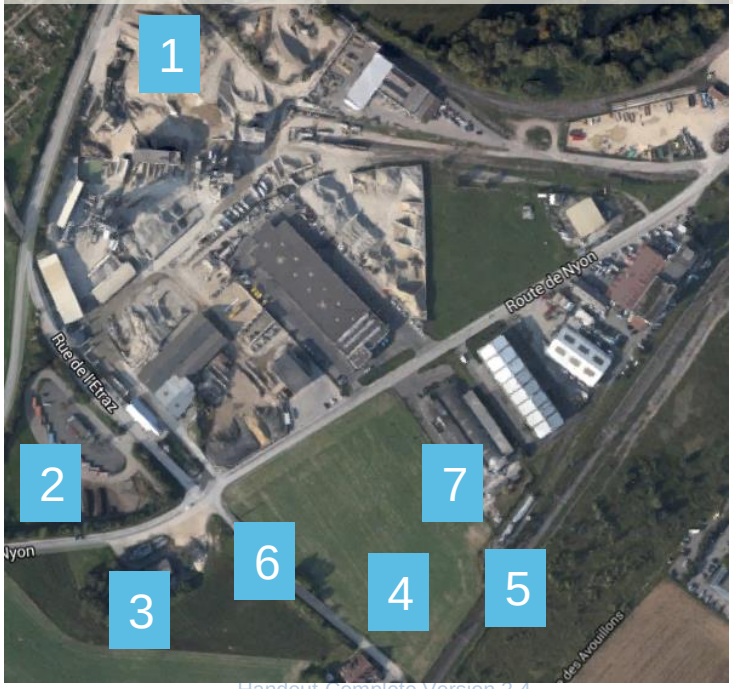
- apply a well defined protocol, and measure on a regular basis the outputs' (gaz and solid residuals) compositions according to various types of waste inputs to validate independently the financial, ecological and energy balance of the machine
- control the activities of all components and interfaces from the shredder to the electrical network 24/7 during a few months
- showcase to incite the investment community to participate to future projects based on Gland's template

1. Perrin Frères Concrete Plant

2. Waste landfills of Gland

3. Romande Energie & SEIC

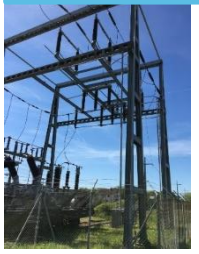
This industrial zone has today a fantastic logistic in place by railways and by truck transportation.
The site has a capacity to treat over 50,000 tons of waste in 2015 and can be increased.



4. Identified site for the live conditions test just built 2 months ago

5. Industrial railway

6. City grid



7. Sadec SA

New Waste loading for 60 Municipalities in Nyon District

Proof of concept overview

ACT

Proof of concept

/ GOALS

Demonstrate the environmental, social and economical impacts of the model in one coastal city or one island to induce the investment community to participate to future projects based on the same concept.

/ CHOOSE THE RIGHT PLACE

- Strong demand from local stakeholders (communities, philanthropists, foundations, investors)
- Large existing network
- Limited political hurdle thanks to strong relationships with local communities and local authorities, social stability, …

/ ON GOING PROJECTS

- First evaluation mission in Lima city conducted on September 2016
- First evaluation mission in Borneo, Malaysia scheduled in November 2016
- Easter Island project fundraising launched in 2016

Race for Water Odyssey 2015 / Easter Island


Peru, Lima


Bornéo, Malaisie

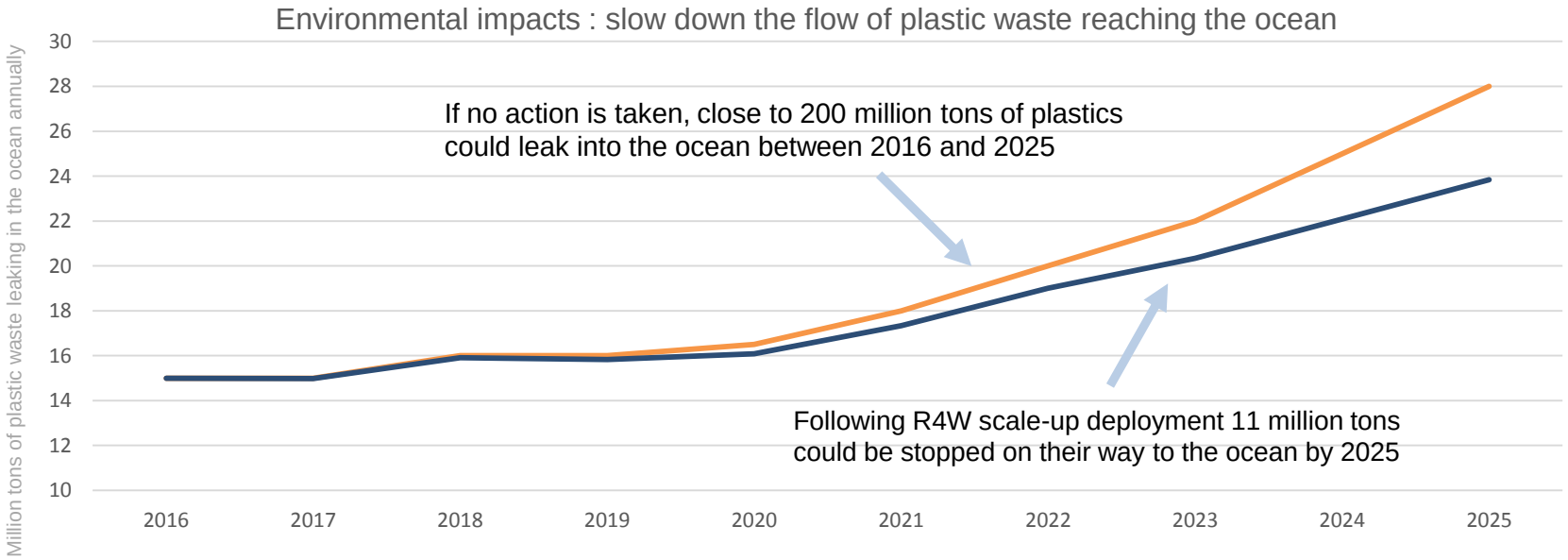
Scalable projects deployment outcomes targets

ACT

Scalable projects deployment

/ **GOALS** : By 2025, achieve a sustainable impact in the following 3 key dimensions

- ENVIRONMENTAL : Reduce the amount of plastic waste reaching the ocean and protect life
  Target : **reduce by 15%** the annual quantity of plastic waste leaking into the ocean
- VALUE CREATION : Identify and help implement solutions that give end-of-life plastics a value by producing clean energy
  Target : **- process 4 million tons of plastic a year** and
  - provide electricity to local communities for an equivalent of 1,9 million four-person Swiss households *
- SOCIAL : Create new sources of income for the local underprivileged communities affected by plastic pollution
  Target : **480'000 jobs**



Figures used in the above chart are based on Jambeck et al's high projections of plastic waste entering the ocean. Source: Plastic waste inputs from land into the ocean, Science, 347, p. 768-771. Details available in appendix "Key Statistics figures & sources".

* average annual electric consumption of four-person households with no electric heating systems in Switzerland : 4 MWh/year. Source: Des appareils ménagers efficaces - Fiche d'information du WWF Octobre 2012.

Share Program - what you don't know can hurt you !

Because education is key and because we need everyone to take responsibilities, we keep raising awareness about the importance of water preservation against the major threat of plastic pollution.

***Alert** decision-makers, **raise awareness** among the general public and **educate** younger generations*

Raising Awareness

Alert, mobilize and educate on the need to better manage plastic waste to prevent water pollution

/ **GENERAL PUBLIC**
We mobilize the general public and influential figures on the extreme urgency of preserving water.

/ **HOW**
Focusing on:
- the plastic pollution of our oceans
- the scientific analysis results of samples collected during the Race for Water Odyssey 2015
- and mainly, on land-based scalable solutions giving a value to end-of-life plastic to prevent the pollution of our waterways

Using different communication materials during local and international manifestations
- "Water Guardian" program
- photo and video exhibition
- the mobile water pavilion

Through various communication media
- Race for Water Ambassador Vessel
- web site
- newsletter
- social network
- film documentary

Education

SCHOOL-BASED ACTIVITIES

/ Race for Water conducted 50-minutes playful and interactive interventions in Swiss and French classrooms. The aim of these activities is to raise awareness about the urgency to act to preserve water among 8 to 12 years-old children.

- We encourage children and youth to take concrete action to preserve our water resources, with cartoon character Titeuf serving as our superhero.

/ The foundation developed educational materials to raise awareness among young generations:

- Educational kit in English, French and Spanish
- eBook in French and English
- Race for Water snakes and ladders game
- Race for Water Quizz

International plastic pollution working groups & conferences 2010-2015

SHARE

/ **The 5th World Future Energy Summit, Abu Dhabi, United Arab Emirates / January 2012**
- Meeting with different countries, companies, NGOs, scientists on future energy, their development and progress

/ **Atelier de l'eau et de la mer, Barcelona, Spain (COI-Unesco) / October 2013**

/ **International Water Summit, Abu Dhabi, United Arab Emirates / January 2014**

/ **Beyond Plastic Med Task Force, Monaco / March 2015**
(Prince Albert II of Monaco, Mava Foundation, Tara Expeditions, Surfrider Foundation Europe)
- 1st conference BEMed (Race for Water with Surfrider Foundation Europe, visio-conference from Bordeaux)

/ **Swisscanto conferences, Switzerland / April - May 2015**
- 4 conferences organized with Swisscanto and the cantonal banks of Valais, Fribourg, Vaud and Jura
- Our Ambassador Anne Richard presented the issue of plastic pollution in water

/ **Our Ocean II, Valparaiso (US Department of State) / October 2015**
- Marco Simeoni, Race for Water President was invited to speak in front of 300 international decision-makers

/ **COP 21, Paris (United Nations) / November - December 2015**
- 6 international conferences at le Bourget, le Grand Palais and aboard the Race for Water Solar Vessel
- Race for Water inaugurated an exhibition called « Plastic pollution in water: from impact to solutions » aboard the Race for Water Solar Vessel

RACE FOR WATER A FOUNDATION TO PRESERVE WATER

WORLD FUTURE ENERGY SUMMIT

INTERNATIONAL WATER SUMMIT Abu Dhabi 2014 20 - 22 JANUARY 2014 ABU DHABI NATIONAL EXHIBITION CENTRE

OUR OCEAN CHILE 2015 VALPARAISO

PARIS2015 UN CLIMATE CHANGE CONFERENCE COP21·CMP11

2010 | 2011 | 2012 | 2013 | 2014 | 2015

RACE FOR WATER ODYSSEY

International plastic pollution working groups & conferences 2016

/ **Polytalk 2016, Brussels (PlasticsEurope) / March 2016**
“Zero Plastics to the Oceans”
- Following the forward-looking dialogue to join visions, opportunities & solutions to prevent marine litter

/ **Plastics Marine Debris - Business Solution Scoping Workshop, Geneva (WBCSB) / April 2016**
- Participating to an opportunity to analyze the current landscape of oceans plastics & business

/ **Micro 2016 International Conference, Lanzarote, Spain / May 2016**
“Fate and Impacts of Microplastics in Marine Ecosytems”
- Presentation of 2 posters with first Race for Water Odyssey results

/ **Interdisciplinary Convention, Maison de la Paix, Geneva / June 2016**
“Epidemics and societies Past, Present and Futur”
- Presentation of Race for Water objectives

/ **Plastic Sea, Maison des Océans, Paris (Foundation Albert 1st Monaco) / June 2016**
“How to treat the problem at source ?”
- Presentation of local solutions noticed during the Race for Water Odysssey and debate regarding existing marine litter solutions with different actors of the plastic sector

/ **Our Oceans III, Washington (US Department of State) / September 2016**
- World leaders, entrepreneurs, scientists, and civil society join-up to identify solutions and commit to actions to protect and conserve our ocean and its resources

2015 2016 2017 2018 2019 2020 2021

RACE FOR WATER ODYSSEY **RACE FOR WATER SOLAR VESSEL PROGRAM**

Race for Water events

For race for water events 2015 – Please refer to our annual report

RACE FOR WATER
A FOUNDATION TO PRESERVE WATER

Annual report 2015
Race for Water Foundation

/ The Race for Water charity event / March 2016
- More than 250 guests came to express their support to Race for Water projects

/ Hotel de Ville Lausanne / March - April 2016
- Photo exhibition and screening mini-clips recounting the 2015 Race for Water Odyssey
- Playful activities around plastic pollution in water did not fail to captivate adults as well as children

/ Musee de l'Elysée / June 2016
- Projection of "our plastic consciousness" with film maker Peter Charaf
- Broadcast on the website of the "Musée de l'Elysée"

/ Gland Golf Club Imperial / August 2016
- Race for Water presents its land-based plastic waste to energy solution

/ Upcoming events
- Release of two documentary films retracing the Race for Water Odyssey and the situation in Guadeloupe
- Publication of the Race for Water Odyssey 2015 scientific results and collaboration with a Geneva based Foundation to make it accessible to the general public

2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021

RACE FOR WATER ODYSSEY

RACE FOR WATER SOLAR VESSEL PROGRAM

2017-2018 exhibitions

Photography exhibition and mini-films realised during the Race for Water Odyssey by the photographer and Media Man, Peter Charaf, to show the need to fight against plastic pollution threatening the waterways of our planet.


Race for Water Odyssey 2015 / Rodrigues

/ GOALS

- Use the power of Race for Water Odyssey's images to raise awareness
- Inspire visitors to act and preserve our water resources
- Bring plastic pollution to the attention of the general public, industries, and legislators

/ POTENTIAL PROJECTS LOCATION

2017 – Quai Wilson in Geneva
Located on the shore of the lake, it gives exposure to a wide audience and opportunities to touch patrons and potential partners.

2017 - Aquatis in Lausanne
Swiss pole of excellence on water preservation, bringing together general public (380,000 visitors / year), younger generations, water experts, politicians, etc..

2018 - Kinder City in Yverdon
Implementation of a ludo-educative center in the heart of Y-Parc Swiss Technopole
Children between three and twelve years old learn about the world of science and technology.


Race for Water Odyssey 2015 / Azores

/ OPPORTUNITIES

- Conferences on water preservation and plastic pollution in the oceans
- Solutions forum for innovation in sustainable or recycled material sources
- Permanent exhibition & development of educational kits

2015 — RACE FOR WATER ODYSSEY
2016
2017 2018 2019 2020 2021 — RACE FOR WATER SOLAR VESSEL PROGRAM

Race for Water Ambassadors

They lift our cause through their feats

Since 2010, we have built a network of ambassadors who are spreading the word and campaigning the oceans:

Tony ESTANGUET
Member of the IOC
Three-time Olympic kayak champion
Patron of the Race for Water vessel

Virginie FAIVRE
Three-time half-pipe world champion

Aurélien DUCROZ
Freerider and skipper – twice freeride ski world champion

Anne RICHARD
Franco-swiss actress, author

Éric LOIZEAU
Sailor and mountaineer – former record holder of the Solo Atlantic crossing – climbed Everest (2003)

Michel DESJOYEAUX
Sailor – Twice winner of the Vendée Globe (2000-2001 and 2008-2009)

Loïc FORRESTIER
Swiss sailor - Bol d'Or winner

ZEP
Creator of Titeuf

Manu BOUVET & Carine CAMBOULIVES
Riders and eco-explorers

Gérard d'ABOVILLE
French Sailor - Race for Water vessel captain

Nicolas ROLAZ
Optimist world champion

Claude THÉLIER
French sailor - multiple winner of the Tour de Guadeloupe

Stève RAVUSSIN
Skipper of the MOD70 Race for Water

Piru HUKE (MAMA PIRU)
Piooneer and leader of environmental actions on Easter Island

Learn Program – support the scientific community

Because so many questions remain open about the scale and the impacts of plastic pollution in the ocean, we are willing to support the scientific community in gaining a better knowledge.

Contribute to the advancement of ***scientific knowledge on plastic pollution in water***

3 Scientific projects

Water Guardian Experts / R4WO 2015 Results / R4WO 2017-2021

LEARN

/ WATER GUARDIAN EXPERTS PLATFORM

To share knowledge on new research regarding plastic pollution

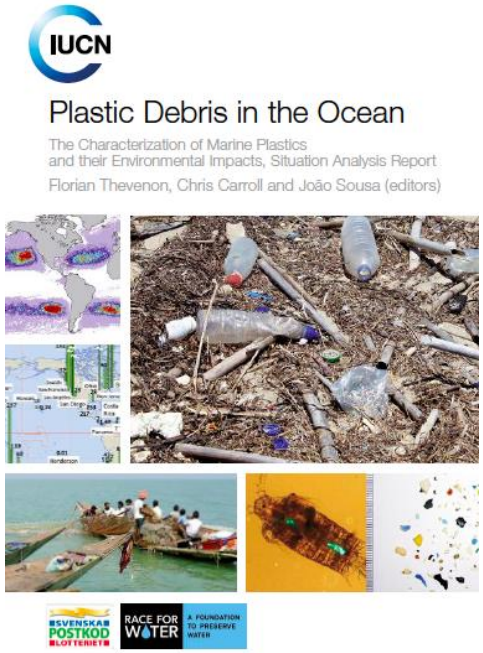
/ RACE FOR WATER ODYSSEY 2015 RESULTS

To understand the toxic effect of plastic pollution on the environment and the food web with 3 university partners:

- Ecole Polytechnique Fédérale de Lausanne
Central Environmental Laboratory (GR-CEL), Lausanne, Switzerland
Microplastics typology (results expected for end-2016)

- Bordeaux University
UMR CNRS 5805 EPOC Laboratory (EPOC), Bordeaux, France
Microplastics toxicity on cell, larvae and fish embryos (results expected for mid-2017)

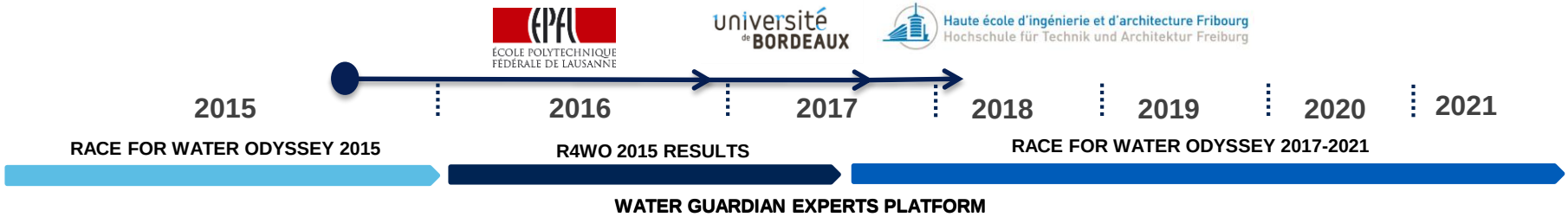
- Haute Ecole d'Ingénierie in Fribourg
Laboratory of the Haute Ecole d'Ingénierie, Fribourg, Switzerland
Analysis of micropollutants adsorbed on microplastics (results expected for end-2017)



IUCN report, 2014. Plastic Debris in the Ocean

/ RACE FOR WATER ODYSSEY 2017-2021

To bring scientific team onboard our Ambassador Vessel for new research on marine environment with priority given to impact analysis of plastic pollution

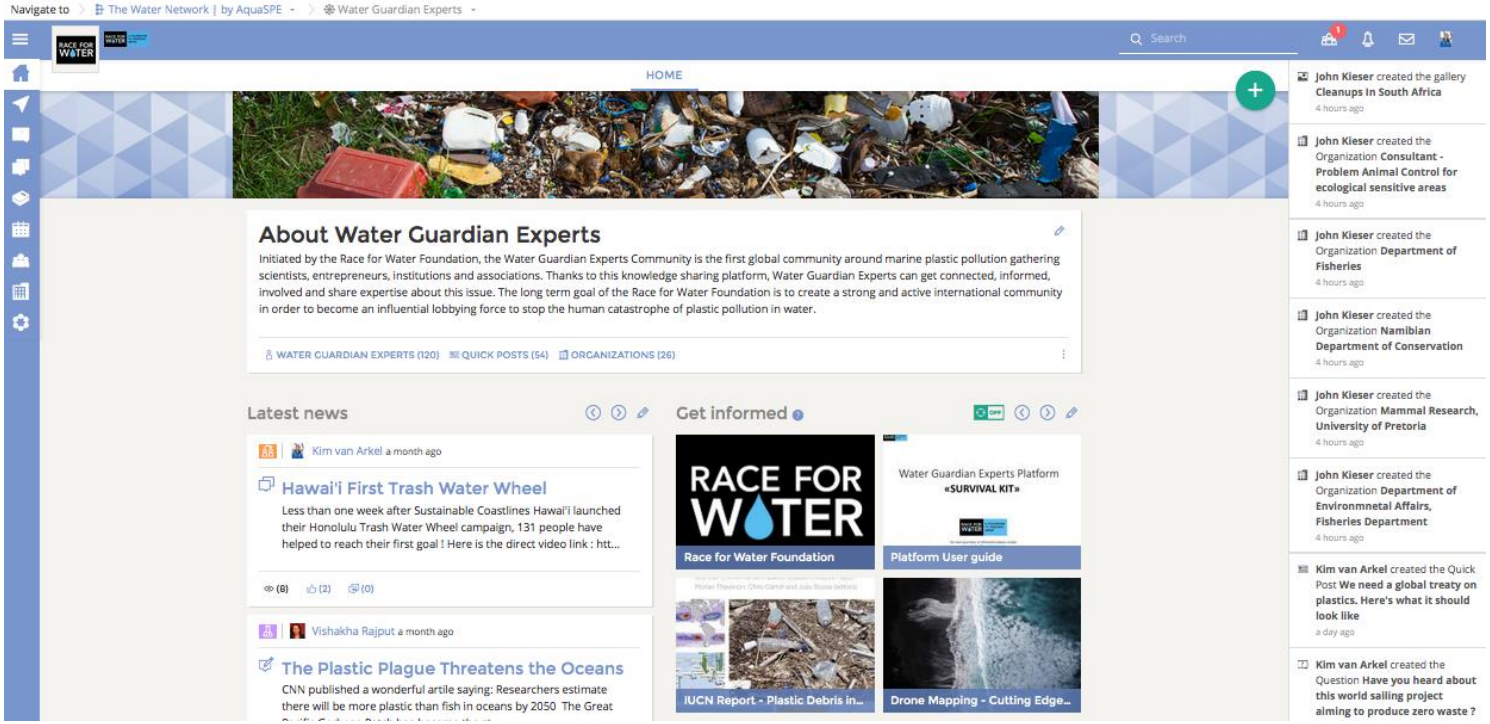


The Water Guardian Experts platform

To share knowledge on new research regarding plastic pollution

LEARN

Thoughts and ideas to share from all around the world !



A unique knowledge sharing platform to get **connected, informed, involved and share expertise** in order to stop the environmental catastrophe of **plastic pollution in the oceans.**

A community of committed **Water Guardian Experts** met mainly during the Race for Water Odyssey 2015: scientists, NGOs, local associations, institutions, governments, managers, industrials…

2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021

RACE FOR WATER ODYSSEY 2015

R4WO 2015 RESULTS

RACE FOR WATER ODYSSEY 2017-2021

WATER GUARDIAN EXPERTS PLATFORM

Race for Water Odyssey 2015

1st global study of plastics sampled on beaches within the 5 gyres

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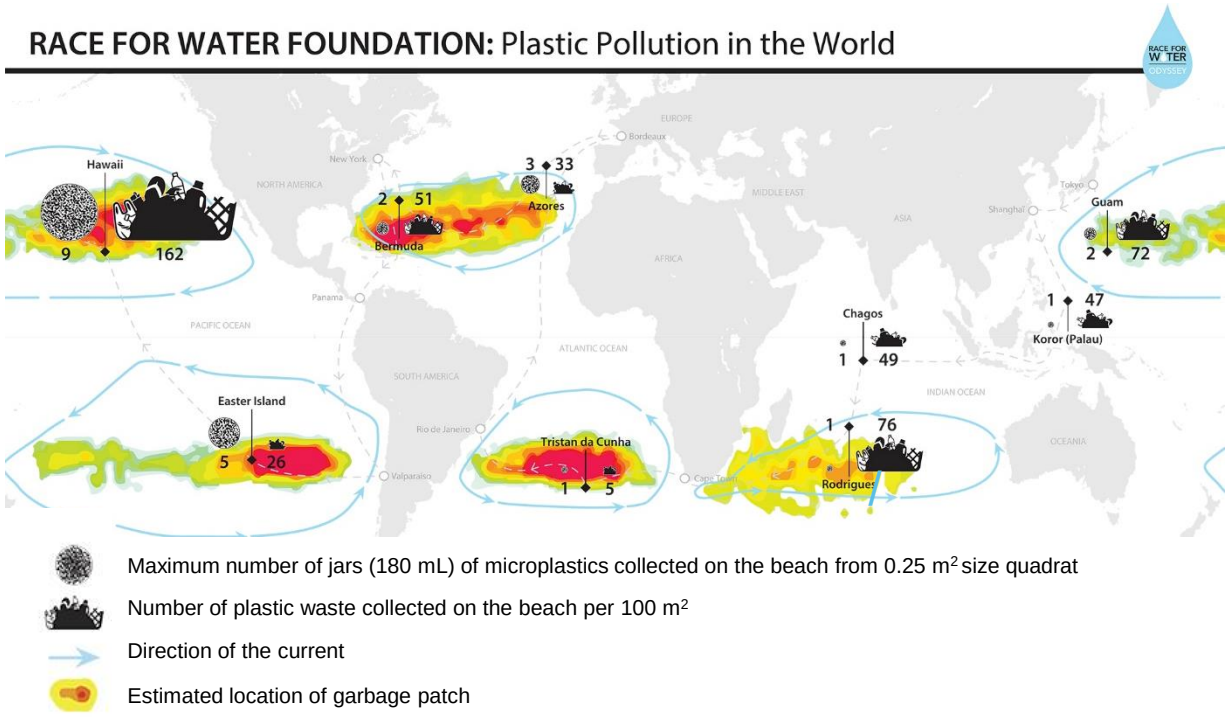


Source: UNESCO-Intergovernmental Oceanographic Commission (IOC), Global Drifter Program and other scientific research in this field.

MOD 70 trimaran R4W sailing during the Odyssey

On each island visited during the **Race for Water Odyssey 2015**, 2 to 5 different shorelines were sampled, following the standardized NOAA's protocol(1)**.** For more information on the R4WO 2015 objectives, see Race For Water annual report 2015.

/ **Microplastics (<5 mm)** samples (jars of 180 mL), were collected in 0.25 m² size, 10 cm depth quadrat

/ **Macro-debris (> 2.5 cm)**, were counted and categorised directly on the beach per 100 m²

2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021

RACE FOR WATER ODYSSEY 2015

R4WO 2015 RESULTS

RACE FOR WATER ODYSSEY 2017-2021

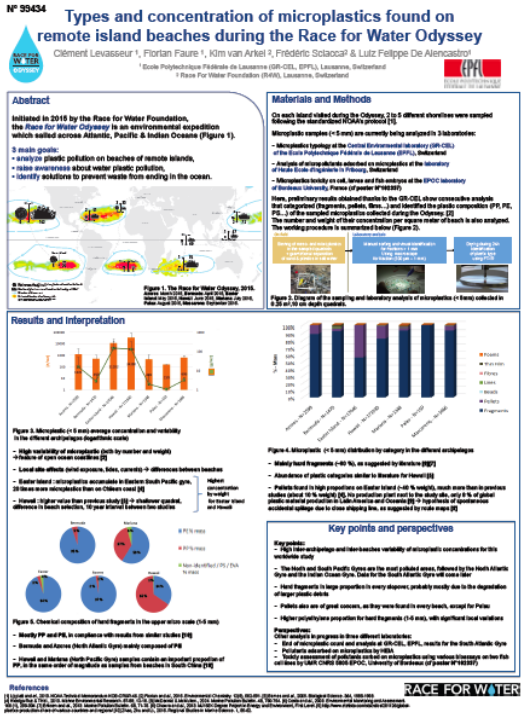
WATER GUARDIAN EXPERTS PLATFORM

1: Lippiatt and al., 2013. NOAA Technical Memorandum NOS-OR&R-46.

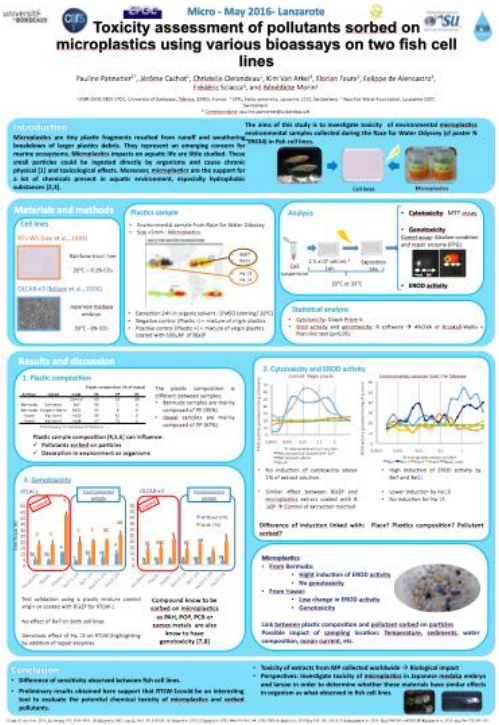
Race for Water Odyssey 2015 results

First microplastics analysis results

First microplastics analysis results presented at MICRO 2016
International Conference, Lanzarote, Spain (*May 2016)*



Poster of the GR-CEL EPFL laboratory preliminary results



Poster of the UMR CNRS 5805 EPOC laboratory preliminary results

2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021

RACE FOR WATER ODYSSEY 2015 — **R4WO 2015 RESULTS** — **RACE FOR WATER ODYSSEY 2017-2021**

WATER GUARDIAN EXPERTS PLATFORM

Race for Water Ambassador vessel

A scientific platform dedicated to research studies

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Race for Water 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, she is also an amazing communication and promotion tool whatever its destination.

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

She can host a scientific team of 5 to 7 people.

/ 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 90m2 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

2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021

RACE FOR WATER ODYSSEY 2015

R4WO 2015 RESULTS

RACE FOR WATER ODYSSEY 2017-2021

WATER GUARDIAN EXPERTS PLATFORM

Race for Water Odyssey 2017-2021

Priority on researching the impact of plastic pollution

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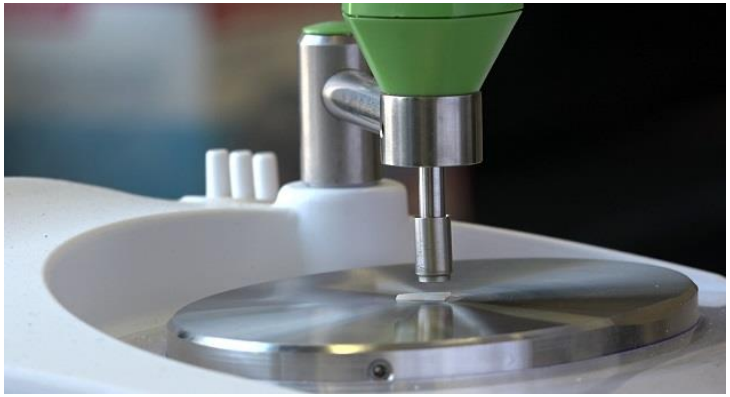
Support the scientific community in gaining a better knowledge of macro and micro plastics in the oceans

/ PLASTIC POLLUTION QUANTIFICATION
Sources, routes and destiny of plastics in the oceans

/ PLASTIC POLLUTION IMPACTS ON ECOSYSTEMS
Transfer of non-native species and biofilms; relationship and interactions with pathogens; physical condition of key marine habitats; climate change influence

/ PLASTIC DEGRADATION AND TOXICITY
Chemicals (UV resistance, flame retarding treatments etc.); physical and biological stress; absorption of persistent pollutants



/ ECOTOXICOLOGICAL EFFECT OF MICRO PLASTICS ON FOOD CHAIN AND HUMAN HEALTH
Absorption, tissue distribution and fate of ingested micro plastics by representative marine organisms;
Persistent pollutant accumulation and transfer through the food chain
Potential toxicological effects of plastic on species and population level impacts

Appendix

Key Statistics figures & sources

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/ PLASTIC PRODUCTION

Key source: World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company., 2016. The New Plastics Economy - Rethinking the future of plastics.
"Plastic production has surged over the past 50 years, from 15 million tons in 1964 to 311 million tons in 2014, and is expected to double again over the next 20 years, as plastics come to serve increasingly many applications."

/ PLASTIC WASTE ENTERING THE OCEAN

key source: Jambeck et al., 2015. Plastic waste inputs from land into the ocean, Science, 347, p. 768-771.
http://jambeck.engr.uga.edu/landplasticinput
“4.8 to 12.7 million tons of plastic entering the ocean in 2010” (sources used in UNEP report, May 2016 Marine Plastic Debris and microplastics)
"Our methods for this estimate were to look at per person waste generation rates in 2010 from 192 countries with a coastline in the world.....From there we had three scenarios of input into the ocean: low, mid and high. Our **8 million metric tons estimate is that mid-range scenario**"
"And it can get worse. **If we assume a business as usual projection with growing populations, increasing plastic consumption and increased waste generation, by 2025, this number doubles- we may be adding 17.5 million metric tons of plastic per year**. If that happens, then our cumulative input over tome from 2010 to 2025 is projected to be 155 million metric tons."

Year	Mismanaged plastic waste [MMT/year]	15% marine debris (MMT)	25% marine debris (MMT)	40% marine debris (MMT)
2010	31.9	4.8	8.0	12.7
2015	36.5	5.5	9.1	14.6
2020	41.3	6.2	10.3	16.5
2025	69.9	10.5	17.5	28.0
Cumulative	618.7	92.8	154.7	247.5

Annual and cumulative quantities (millions of metric tons (MMT)) of mismanaged plastic waste and plastic marine debris (assuming three different conversion rates) for 2010-2025.

/ TONS AFLOAT AT SEA

Key source: Eriksen et al., 2014. Plastic Pollution in the World's Ocean: More than 5 trillion plastic pieces weighing over **250,000 tons afloat at sea,** PloS ONE 9(12).

A management tandem with strong entrepreneur and strategist accomplishments

Marco Simeoni

President & Founder of Race for Water

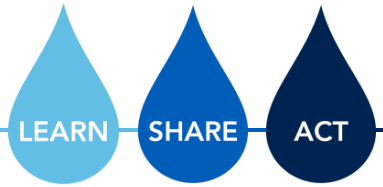
An entrepreneur at heart, Marco Simeoni built and developed several companies, starting with LANexpert, in 1995. In 2008, he brought them all together under the Veltigroup umbrella, one of Switzerlands' leading mid-sized technology companies. The same year, he meets Stève Ravussin and Franck David with whom he decides to helm a project of monotype multihull racing sailboats, and sees this championship as a way to highlight a cause that's close to his heart: water preservation. This is the vision that led to the creation in 2010 of the Race for Water Foundation, which aims to inform, share, and take action for the preservation of water and our oceans in particular.
Following the sale of Veltigroup in 2014, he dedicates himself entirely to the foundation, in order to put his entrepreneurial spirit at the service of the environment.
In 2015, he personally participates to the "Race for Water Odyssey", a unique expedition that aims to draw up the first global assessment of plastic pollution in the ocean. After 9 months aboard the "Race for Water" trimaran, his message is clear: “plastic waste is everywhere and it is unrealistic to collect it on the high seas. Action must take place on dry land, it is crucial to treat plastic waste before it enters the waterways”. The new foundation’s orientation is born: identify, promote and help implement solutions that give end-of-life plastics a value and create new sources of income for the people most affected by pollution.

Michel Heiniger

General Director of Race for Water

Michel holds a degree in engineering and economics. He founded and managed during 17 years an international group with branch in 4 countries, active in 50 countries and 4 continents. He then continued his career in the Management Consulting field during 17 years as a partner and director to the main audit, tax and advisory companies. He completed more than 500 mandates in the following sectors: retail and consumers, industrial products, entertainment and media, international organizations and not-for-profits, public sector and trading commodities. He therefore acquired international field experience in various sectors throughout his career.
He is also bringing his wide expertise and experience in advising over 5 years the Swiss Councillor, head of the Federal Department of Foreign Affairs (FDFA) and the Directorate of Swiss Agency for Development and Cooperation (SDC) including the Humanitarian Department Aid on strategic reforms. In addition, he has been advising Not-for-Profit organisations such as ICRC, IFRC, IUCN, WWF International, International organizations, international NGOs and 18 various UN entities in Europe and the United States.
He is particularly sensitive to water preservation issues having grown up near the Mekong River in Laos. A solution-oriented person, Michel is particularly thrilled to join the foundation and to lead its solutions programme to tackle plastic pollution in our oceans.

Race for Water Governance project



Race for Water

Internal Audit : Outsourced

Foundation Board Members

President: Marco Simeoni | Francis Waldvogel | Toni Frisch | Gilles Robert-Nicoud | Angela de Wolff

Advisory Board

Alexandre Closset | Eric G. Sarasin | Philippe Sarasin

General Director
Michel Heiniger

Friends of Race for Water (Club)

Franklin Servan Schreiber
Jean-Laurent Bourquin
Cordula Ströher

United Nations Partners : UNEP, UNESCO

Partners: IUCN, WBCSD

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COMMUNICATION

RfW Ambassadors

BUSINESS DEVELOPMENT

RESEARCH
Science

Partner Universities: EPFL, UNIGE, UNIFR, Uni. Bordeaux

Water Guardian Expert Platform

AWARENESS
& Education

Network of Volunteers

SOLUTIONS
« Waste to Energy »

FINANCE & RH admin / Administration

External Auditors: Intermandat

RACE FOR WATER AMBASSADOR SOLAR VESSEL – Organisation, programme, partners/sponsors, on-land & at-sea operations (Lorient)

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

Race for Water Odyssey 2015 / Koror