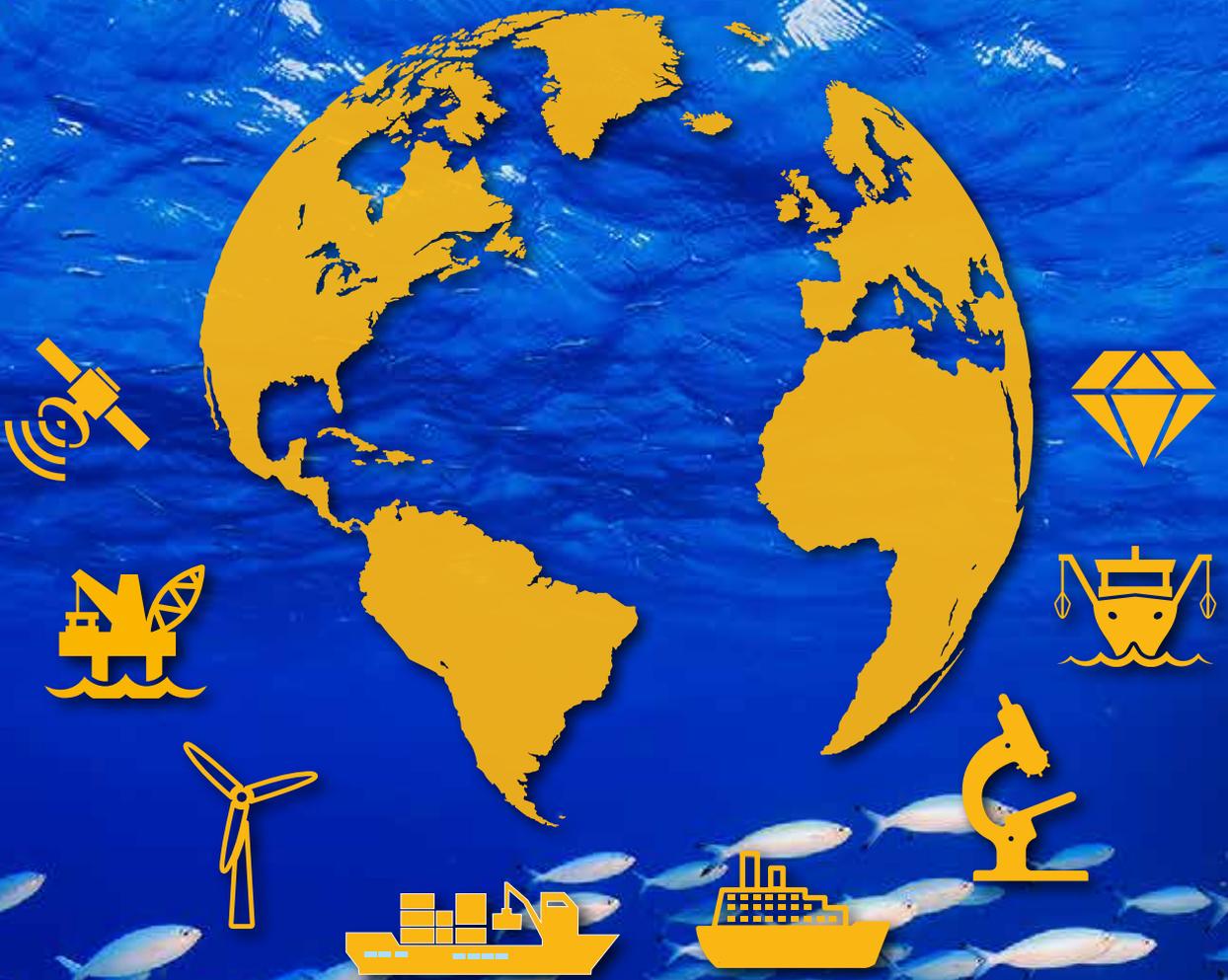




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# BLUE GROWTH STRATEGY

# No blue growth without clean oceans



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Amongst many other actors, the Veolia Foundation has been supporting community-oriented, non-profit projects across the world since 2004. Its operating approach is grounded in high-quality partnerships and innovation, thereby encouraging the creation of high-impact and replicable models. Marine litter is one of our concerns and we welcome the fact that, by putting this topic high enough on the political agenda and developing regulatory tools, international and European institutions are paving the way toward a more comprehensive framework.

In the late 80s, the discovery of the “Great Pacific Garbage Patch” helped raise awareness on an issue that had been overlooked before: marine litter. Since then, public authorities and scientists have developed an impressive body of knowledge showing how marine pollution is closely tied to human activity, but also, in return, has an impact on human health and the economy. Indeed, it shed light on what had mostly been invisible before: not only is a vast amount of debris trapped in rotating ocean currents, known as gyres, but those materials are themselves broken down into tiny fragments which are then widely dispersed and ingested by marine life. This has potential consequences for wildlife and humans alike, as it can contaminate the whole food chain.

As is usually the case for global issues, figures and statistics can be quite contentious but they all point to big numbers: according to the European Commission, it is estimated that more than 150 million tonnes of plastics have accumulated in the world's oceans, while 4.6-12.7 million tonnes are added every year. In terms of origins, approximately 80% of marine litter is land-based and 20% sea-based, although local discrepancies shall be taken into account. Finally, we estimate that 70 to 90% of the waste found in this environment is plastic, which makes it necessary to address this particular stream as a matter of priority. While undeniable progress has been made in determining the amount and location of plastics, more details on how the debris is leaked are needed.

But what can other stakeholders such as citizens and organizations such as the Veolia Foundation do to make this operationally efficient and economically viable? As cleaning up the oceans is desirable but in practical terms challenging, tackling the problem at its very source should be given priority, by preventing debris from getting into oceans in the first place, while creating new, innovative partnerships involving all relevant stakeholders.

## 1 - Cleaning up the oceans is a necessity in the long run but will require investments and new technologies, so we should focus on smaller-scale projects as well

Today's large-scale schemes to clean up oceans are not yet practicable as most debris, especially microplastics, is distributed all around the globe. Vast sums of money and coordinated R&D will be required to develop innovative technologies in this field, but this has to be done in the long run, as debris found in oceans may contain toxic pollutants that can be widely dispersed, accumulated into biotopes, and finally passed on along the food chain.

In the meantime, inclusive smaller-scale projects can make a lot of sense to avoid future leakage and associated marine litter, but also to trigger remediation around coastal areas where water pollution has already caused damage. At the tip of Toulon Harbor, the Amphitria Water Treatment Plant (designed and built by Veolia) has been treating pollution and wastewater, leading to great improvements in water quality and helping to restore a healthy sand bed in the nearby sea. To attract back the flora and fauna that used to be so abundant, an innovative artificial



*REMORA Project: Consisting of light structures, the reef was designed to provide a habitat and protection to young aquatic life by boosting the fixation of microfauna, microflora and postlarvae, thus providing nutrients to both the fish and the seabed.*

reef was built in 2014 as an experiment called “REMORA” (sponsored by the Veolia Foundation and the Rhone-Mediterranean-Corsica Water Agency), conducted by a multidisciplinary group of partners. Three years after the launch of this program, surveys and studies made it clear that aquatic fauna and flora restoration was tangible in the harbor of Toulon. Small may not be always beautiful, but in these cases it is surely innovative, affordable and replicable!

## 2 - Tackling the problem at its source is a priority as the move toward the circular economy and resource efficiency can provide new tools

When fighting against pollution, the mantra could be: know what you are combating, then target the root cause.

As for knowledge, the European Union has dedicated substantial resources to better understanding marine litter through a set of robust studies. But all relevant stakeholders need to contribute to this daunting task. In this regard, the Veolia Foundation backed a number of expeditions called “TARA Oceans” to raise awareness of the many environmental challenges associated with the Mediterranean and to study the growing presence of microplastics in the sea and their probable incorporation in the food chain (previous studies targeted Climate Change and its impact on our biosphere). The results of this study, run by the University of Michigan (USA) and the CNRS Villefranche-sur-Mer Laboratory, will offer a basis for action to guide decision-makers in Mediterranean neighboring countries in dealing with this tissue. The program has also

received the backing of many multilateral institutions such as MedPAN, the Environmental Directorate of the European Commission, and the Intergovernmental Oceanographic Commission (UNESCO/IOC).

With regard to the source of marine litter, the usual suspects are poor waste and water management. Upstream measures (before a product has become waste) such as waste prevention, eco-design of products or substitution of pollutants are the cornerstones of a toxic-free environment. Nonetheless, downstream measures addressing and supporting proper waste and water treatment should not be overshadowed in the process, in line with the waste treatment hierarchy that gives priority to reuse, recycling and energy recovery (in that order). In this regard, the funding opportunities offered by the EU programme “Horizon 2020, Blue Green Innovation for Clean Coasts and Seas” represent an efficient tool to improve waste and water management in those areas.

Plastic is the poster child that epitomizes the many challenges, opportunities and pitfalls to be encountered on this road: it is as important to reduce the quantity and toxicity of it as to build required infrastructure to collect, sort, decontaminate and recycle the fraction that has become waste or to use it as fuel as a last-resort, yet valuable, option. Supporting ailing recycling markets when needed can also provide the incentive for companies to invest time, money and expertise in recycling and resource efficiency. As a company, Veolia is already taking action to address this issue by establishing a network of plastic recycling facilities, innovating to increase the recycling of plastics and collaborating in platforms such

as the New Plastics Economy with the Ellen MacArthur Foundation.

## 3 - Raising awareness and building capacity at local level go hand in hand with curbing illegal practices

The “BeMed” initiative, bringing together the Veolia and Prince Albert II Foundations, is a good example of how companies can help raise public awareness about environmental issues. Since 2006, the Prince Albert II of Monaco Foundation (FPA2) has supported initiatives in the fields of research and innovation. In March 2015, Veolia committed to undertaking concrete initiatives to reduce the impact of plastic waste in the Mediterranean. A call for micro-initiatives was made on 8 June 2016, World Oceans Day, to encourage behavioral changes in terms of plastic waste management through local capacity building and exchange of best practices. Another goal was to set up a Mediterranean network of local stakeholders actively involved in fighting against plastic pollution. This initiative is a positive story of how to share best practices and empower local communities, bearing in mind that punishing illegal practices and wrongdoings is also part of the equation.

### Conclusion:

There is a clear momentum for tackling marine littering and ocean pollution. Beyond ambitious targets and full implementation of the Marine Directive for litter, EU institutions and Member States should seize the opportunity offered by the ongoing work on the Circular Economy Package and the Strategy for Plastics to address this issue. This could be done in large part by incentivizing and investing in resource-efficient waste and wastewater management to reduce future leakage.

Involving all relevant stakeholders, such as competent authorities, companies and citizens, is key to transforming this momentum into long-lasting initiatives. While the Veolia Foundation, along with many other organizations and institutions, is working to help us gain a better understanding of the magnitude and impacts of marine litter, increasing awareness on a local scale is the ground on which replicable projects can be developed.

More information on Veolia's projects:

- REMORA:

<http://www.fondation.veolia.com/en/revitaliser-le-milieu-naturel>

- TARA Oceans:

<http://www.fondation.veolia.com/en/actions/projects/14EB1790%2Ctara-expeditions.htm>

- BeMed :

<http://www.fondation.veolia.com/en/promoting-initiatives-reduce-plastic-pollution-mediterranean>



“TARA Oceans” expedition



# The Ocean Economy in 2030

