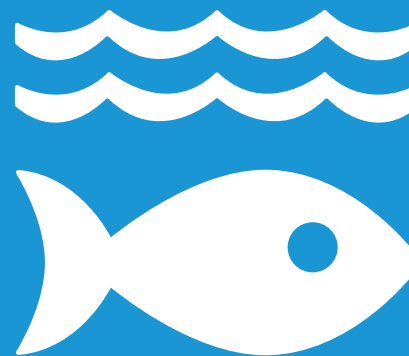




14 LIFE BELOW WATER



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GOAL



CHALLENGES



DATA



ACTIONS



In view of the urgent need to preserve marine ecosystems, an earlier compliance date was established for the seven targets of this goal: 2020. The proposal is to prevent and reduce marine pollution of all kinds, to reduce the effects of ocean acidification to the minimum and to regulate fishing activity in order to reduce overexploitation.

Increasing scientific knowledge, developing research capacity, transferring marine technology and providing access for small-scale artisanal fishermen to marine resources and markets are some of the means of action proposed by this goal.

The challenge to preserve oceans and seas

In this case, the United Nations Development Programme has included as a goal in the Agenda preserving and using the oceans, seas and marine resources in a sustainable manner.

Humanity is faced with a key challenge consisting of guaranteeing water as an indispensable resource in the future. The sea's temperature, its chemical composition, its currents and the life living in it are key drivers for the Earth and its inhabitants.

It is a paradox that while 30% of the fish stock in the world is overexploited, in such a way that it does not produce a sustainable yield, more than 3 billion people

depend on marine and coastal biodiversity. Furthermore, the oceans absorb 30% of the carbon dioxide generated by human activity and, even so, an increase of 26% in acidification has been recorded since the beginning of the industrial revolution. These are brutal figures that should make us blush: in each square kilometre of ocean an average of 13,000 pieces of plastic waste is found!

In relation to the deterioration of the sea, we are also able to observe the degradation of fresh waters. Currently, water shortages affect more than 40% of the world's population; each year more than 2 million children die due to the consumption of polluted water; 1.8 million people use unsafe sources of drinking water; 2.4 million people lack basic sanitation services; and 80% of the waste water generated by human beings goes untreated into rivers and seas.

In order to solve this very serious problem, we need to look for an integrated approach, based on international law, that guarantees the protection of the marine ecosystems anywhere in the world. Moreover, citizens must be made aware of the responsible consumption of water, and technologies that improve the efficiency of its management must be promoted.



At Auren, we work on projects to recover the coasts and beaches, sustainable tourism development strategy services, and quality consultancy and environmental certification systems. Furthermore, we are aware of the great challenge of preserving the water as a source of life and co-operate with the institutions that include this within their goals.



Prevent and significantly reduce marine pollution of all kinds, in particular that produced from land-based activities, including marine debris and nutrient pollution.

Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.

Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

Effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

Conserve at least 10% of coastal and marine areas, consistent with national laws and international law and based on the best available scientific information.

Prohibit certain forms of fisheries subsidies which contribute to overcapacity

and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

Increase the economic benefits that small island developing States and least developed countries obtain from the sustainable use of marine resources, in particular through the sustainable management of fisheries, aquaculture and tourism.

Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular the small island developing States and the least developed countries.

Provide access for small-scale artisanal fishers to marine resources and markets.

Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of the document "The Future We Want".





Oceans cover three quarters of the Earth's surface, contain 97% of the Earth's water, and represent 99% of the living space by volume.

Over 3 billion people depend on marine and coastal biodiversity for their livelihoods.

Globally, the market value of marine and coastal resources and industries is estimated at \$3 trillion per year or about 5 per cent of global GDP.

Oceans contain nearly 200,000 identified species, but actual numbers may lie in the millions.

Oceans absorb around 30% of carbon dioxide produced by humans, buffering the impacts of global warming.

Oceans serve as the world's largest source of protein. More than 3 billion people depend on the oceans as their primary source of protein.

Marine fisheries directly or indirectly employ over 200 million people.

Subsidies to fishing are contributing to the rapid depletion of many species and are impeding the efforts to save and restore the global fisheries and the efforts related to them, causing ocean fisheries to generate US\$ 50 billion less per year than they could.

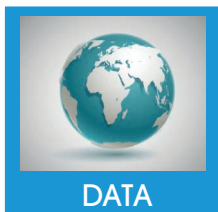
The open sea spaces show that the current levels of acidity have increased by

26% since the beginning of the Industrial Revolution.

The coastal waters are deteriorating due to the pollution and eutrophication. Without coordinated efforts, the coastal eutrophication is expected to increase by 20% in the great marine ecosystems around 2050.

In the world there are 7 large plastic islands, which are the result of more than 8 tons of waste that invade seas and oceans:

1. *Sargassi Garbage Patch* (discovered in 2017) in the Sargasso Sea. It is formed by easily recognizable waste: shampoo bottles, fishing gear, rigid containers, bags and many other sorts of plastics.
2. *Arctic Garbage Patch* (discovered in 2013) in the Barents Sea, close to the Arctic Circle. This is the smallest plastic island; the waste come from Europa and from the east coast of Northern America, which travel with the ocean currents towards the north of Norway.
3. *Indian Ocean Garbage Patch* (officially discovered in 2010, although it has existed since 1998): this island spreads over an area of more than 2 million square kilometres, with a density of 10,000 particles per square kilometre.
4. *South Atlantic Garbage Patch*: this is one of the smallest ones, spreading over more than 1 million square kilometres and moving with the current from the South Atlantic. It is located between South America and the south of Africa.
5. *North Atlantic Garbage Patch* (discovered in 1972): this is the second-largest island by extension (it is estimated to be spread over 4 million square kilometres). However, it is famous due to its high density of waste: up to 200 thousand particles per square kilometre. It moves with the current from the North Atlantic.
6. *South Pacific Garbage Patch*: this was recently discovered near the coasts of Chile and Peru. It has a surface area of around 2.6 million square kilometres and contains mainly micro-fragments of plastic materials eroded over time and through atmospheric agents.
7. *Great Pacific Garbage Patch* (it is more than 60 years old): it is located in the Ocean, between California and the Hawaiian archipelago. It moves by following the ocean current from the North Pacific subtropical vortex. It is the biggest island of plastic in the world. Its size is huge: it is estimated to occupy 1.6 millions of square kilometres. According to the United Nations Environment Programme (UNEP), the



Pacific waste island is growing very rapidly (fed by a ton of waste a day), to the point that it will be soon be visible even from space.

Around 70% of marine waste drops to the bottom of the ocean, and therefore we only see a small part of it, the part that floats.

The plastic ends up entering the human food chain, because part of the micro-plastics that float on the sea mix and merge with plankton; as a result, fish eat it and and we in turn eat them. A recent study conducted by the University of Newcastle (Australia), at the request of the WWF, calculated for the first time that the amount of plastics we eat is about the size of a credit card per week.

FIGURES

75%

The ocean covers three quarters of the Earth's surface and represents 99% of the living space of the planet by volume.

200,000

The ocean contains almost 200,000 identified species, but the real figures may be in the millions.

40%

Up to 40% of the ocean is highly affected by pollution, depleted fish stock, the loss of coastal habitats and other human activities.

30%

The ocean absorbs around 30% of the carbon dioxide produced by human beings, lessening the impact of global warming.

3 billion

More than 3 billion people depend on marine and coastal biodiversity for their livelihood.

\$ 3 billion

At a global level, the market value of marine and coastal resources and industries is estimated at 3 billion dollars yearly, around 5% of global GDP.

More than 8 million plastic particles reach the sea every day.

Since the 50s, more than 8.3 billion tons of plastic have been manufactured.

40% of the current production is aimed at non-reusable packaging.

Each minute, one million plastic bottles are purchased in the world.

Plastic bottles take more than 450 years to decompose.

There are 500 times more micro-plastics than stars in our galaxy.

50% of the world's population have micro-plastics in their digestive system.

If we continue at this rate, plastic waste will double over the next decade.

In 2050, according to the estimate of the Ellen MacArthur Foundation, the oceans could contain more plastics than fish.

Each year, more than 8 million tons of plastic are discharged into the seas, which is equivalent to discharging a dump truck full of plastics every minute.

Plastic garbage in the ocean is estimated to already exceed 5 billion pieces of plastic, weighing roughly more than 150 million tons.

Only 9% of all the plastic manufactured in the whole world is recycled.

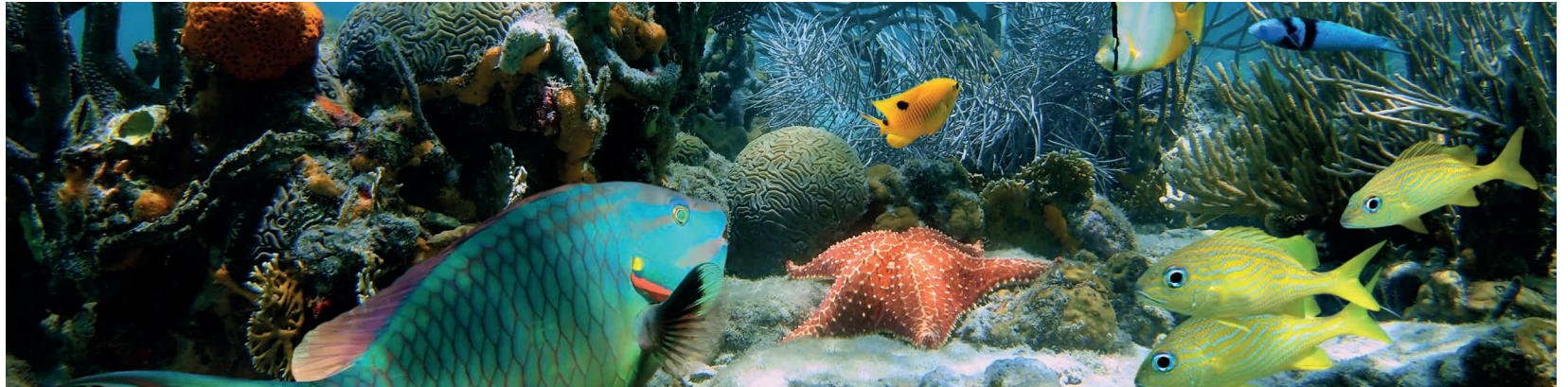
In Spain, 50% of the plastics that reach the waste management systems end up in dums without being recycled.

45% of the plastics used in Spain are only for packaging.

Around 70% of marine waste drops to the bottom of the ocean, and therefore only a small part of it floats.



ACTIONS



Last summer, the authorities of the Australian city of Kwinana installed a new filtering system in the Henley reserve. This system is incredibly simple, but useful. Both the Government and the citizens have already seen the benefits of using it and are very pleased that they did.

It consists of a net that is placed in the outlet of a drain pipe that helps catch large debris and protects the environment from pollution.

Use fewer plastic products

Plastic is one of the main threats to the ocean. In order to limit its impact, you can stop using PET bottles and replace them with a thermos, and use fabric bags to do the shopping.

Purchase sustainable sea products

Many species are depleting due to demand and poor fishing practices. It is important to look for brands or businesses that sell marine products certified as using sustainable practices.

Use biodegradable products at the beach

There are biodegradable sunscreens and suntan lotions that do not do any harm to marine species; try to purchase these kinds of products: they indicate in their label that are environmentally friendly.

Avoid the use of cosmetics that contain plastic microspheres

Polyethylene (PE), polypropylene (PP) and/or nylon. They are usually contained

in exfoliating products. Instead, choose cosmetics with natural compounds such as clay, dried fruit shells or seeds.

Say “no” to disposable razors

Replace them with an electric razor or a metal razor with replaceable blades (the old-fashioned ones), which will allow you to save a great deal of money.

Do not leave rubbish on the beach

During your holidays, it is important to take care of the waste you generate and not expect someone else to do so for you. Show your culture of environmental respect and, if you find any rubbish on your way, you can help collect it. With this simple action, you will be contributing to not polluting the sea.



Travel by sea responsibly

If you practice some sports such as kayaking or other activities in the water, do not throw anything into the sea and be aware of the marine life that lives in the water around you. If you are planning to take a cruise, choose the option that is the most environmentally-friendly.

Do not purchase products that affect marine life

Avoid purchasing products that damage the marine ecosystem, such as coral or seashell jewellery or accessories made of hawksbill turtles or sharks.

Reduce CO₂ emissions and the consumption of energy

The effects of climate change on the oceans can be reduced if we reduce the emissions of CO₂ with small actions such as stopping using the car or reducing its use, starting to use compact fluorescent lightbulbs, switching off the lights, etc.

Support organisations that work in favour of the oceans

There are many organisations that work in order to protect marine habitats; you can support these institutions with voluntary work, financial support or advertising

Do not drink bottled water

Take advantage of the quality of the water in Spain and drink water from the tap. We will thus be reducing the use of packaging and the pollution of our seas and our planet.

Reduce and recycle

If you cannot reduce the consumption of plastic any further, reuse these products whenever you can and recycle in the corresponding containers.

Plastic-free frying pan

If it is time to replace your old frying pan, choose one made of ceramic, iron, copper or titanium. These are materials that are much more environmentally-

friendly, since they do not contain polytetrafluoroethylene, i.e., what we all know as the registered trademark Teflon.

Wooden matches / refillable metal lighters

Do you need a lighter? Avoid plastic lighters and use wooden matches or refillable metal lighters, which are also prettier. Because we can avoid the use of plastic even in the smallest details.

Buy in bulk

Save plastic by buying everything you can in bulk. Reuse all the bags you have (even if you use plastic bags). You can use net bags, which are also very useful for storing food. As they let the air flow, they keep fruit, greens and vegetables fresh for longer.





14 LIFE BELOW WATER



committed to



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- Denmark
- Finland
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- Greece
- Hungary
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- Norway

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- Romania
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- Serbia
- Spain**
- Sweden
- Switzerland
- The Netherlands**
- Ukraine
- United Kingdom

AMERICA

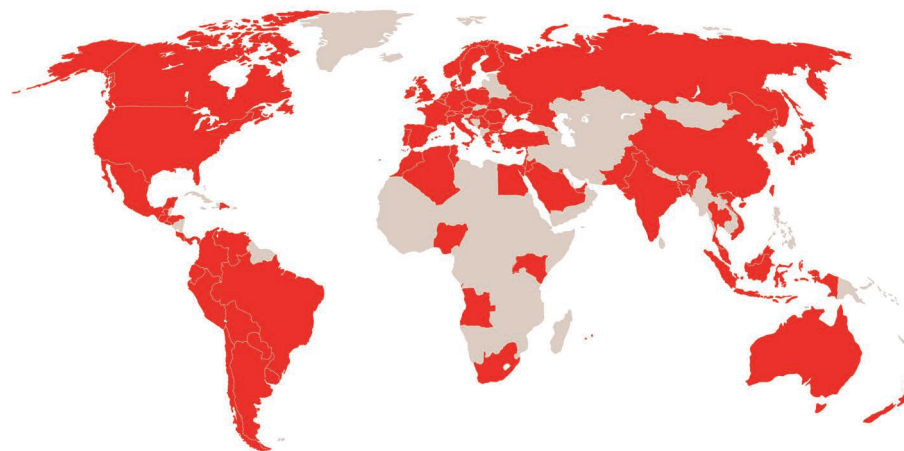
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