

Plastics pose biggest threat to oceans

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Renowned American oceanographer Sylvia Earle has studied the sea extensively for more than 60 years, and logged more than 7,000 hours researching and filming marine life since her first dive at age 16.



A man sorting a sea of plastic bottles at one of the Wecycler hubs in Lagos, Nigeria. Most plastic litter from cities ends up in oceans. Photo: Panos/Joan Bardeletti

Earle, who in the 1980s was the first woman chief scientist of the National Oceanic and Atmospheric Administration, now faces a challenge greater than the round-the-world oceanographic cruise she took in 1964 or the 1970 experiment for which she, and her all-female crew, spent two weeks in an underwater capsule on a coral reef.

Earle is rallying the world to save the seas, which face the deadliest threats to their existence — as do the millions of world citizens whose survival depends on them.

From her bully pulpit, Earle warns that sea life is being destroyed from every direction, by a combination of overfishing, rising temperatures and plastic waste. She notes that since the 1950s, the world has lost 50% of its global coral reefs and 90% of its big fish.

Choking on plastic junk

Oceans are choking on plastic junk — millions of tonnes of water bottles, soda bottles, drinking straws and single use plastic bags. Worse still, what we see floating on the surface accounts for only 5% of all the plastic litter that has been dumped into the sea. According to Ocean Conservancy, a US environmental non-profit, the other 95% is beneath the surface, where it strangles underwater creatures and wrecks aquatic ecosystems.

“Oceans are now clogged with plastics, especially discarded fishing gear and single-use plastics,” Earle told Africa Renewal in an interview.

Today the world is producing 20 times more plastics than 40 years ago. This means that each year more than 8-million tonnes of plastic ends up in the oceans, wreaking havoc on marine wildlife, fisheries and tourism and marine ecosystems. Only less than 14% of all plastic is recyclable, and it is high time someone came up with an innovation or technology to deal with the remaining 86%, which could create \$80bn-\$120bn in revenues, according to a recent report by the Ellen MacArthur Foundation which works with business, government and academia to build an economy that is restorative.

Plastic does not rot

Sadly, plastic waste that finds its way into the ocean will remain there for hundreds of years because plastic does not rot. In fact, plastic is so durable that the United States Environmental Protection Agency says, “Every bit of plastic ever made still exists.” Once it gets in the seas, plastic waste leaches chemicals, many of them toxic, into the seas.

“Up to 80% of all litter in our oceans is made of plastic. At the rate at which we are dumping items such as plastic bottles, bags, cups and straws after a single use, by 2050 we will have more plastics in the oceans than fish,” warns the United Nations Environment, the UN agency mandated to protect the environment.

Because of its low density, plastic litter is easily transported over long distances from source areas. The ocean undercurrents scatter it to every corner of the earth, some of it floating on the oceans and others sinking to the seabed.

According to the US-based Center for Biological Diversity, there are “15–51-trillion pieces of plastic in the world’s oceans — from the equator to the poles, from Arctic ice sheets to the sea floor”. Emerging research suggests that not one square mile of ocean surface anywhere on earth is free of plastic pollution.

Microbeads in cosmetics

Making matters worse, the cosmetics industry now adds tiny plastic beads called “microbeads” to hundreds of toiletries, such as body and facial scrubs and even toothpaste. These tiny particles easily go through water filtration and drainage systems to end up in the sea, where they are ingested by fish and seabirds. UN Environment warns that about 99% of all seabirds will have ingested plastic by 2050 if nothing is done to reverse the trend.

Africa has not been spared the plastic menace. Even though most of the plastic trash in Africa comes from outside the continent, African cities and coastal towns are grappling with their own mountains of garbage, mostly plastic that ends up in the ocean. Earle cited the islands in the northwest Indian Ocean as the most affected by plastic marine litter in Africa.

Plastics in the ocean kill or harm more than 300,000 marine animals every year, said Earle. Some creatures get entangled in the plastic debris, while others like seabirds, turtles, fish, oysters and mussels ingest the plastics, which end up clogging their digestive systems and causing death. Fish and birds mistake smaller plastic particles for food and feed on them in enormous quantities.

“When the young birds eventually die, you can literally see small balls of plastics next to their skeletons after the body decomposes,” Earle lamented.

Clean Seas campaign

The plastic menace has become so dire that in February the UN launched the Clean Seas campaign at the Economist's World Ocean Summit in Bali, Indonesia. This is a global effort to convince governments to pass plastic reduction policies, and industry to minimise plastic packaging and redesign its products. The UN is also urging consumers to change their plastic disposal habits before irreversible damage is done to the seas.

"It is past time that we tackle the plastic problem that blights our oceans. Plastic pollution is surfing onto beaches, settling onto the ocean floor, and rising through the food chain onto our dinner tables. We've stood by too long as the problem has gotten worse. It must stop," said Erik Solheim, the head of UN Environment, at the launch of Clean Seas campaign.

Throughout the year, the campaign will be announcing ambitious measures taken by countries and businesses to ban or tax single-use bags, eliminate microplastics from personal care products and otherwise dramatically reduce the use of disposable plastic.

So far more than a dozen countries in Africa — among them Cameroon, Ethiopia, The Gambia, Guinea-Bissau, Malawi, Mali, Mauritania, Rwanda, Sierra Leone, Tanzania and Uganda — have either adopted or proposed bans on polythene bags.

Early this year, Kenya announced a ban on the manufacture and import of all plastic bags, effective later this year. Some 100-million plastic bags are handed out every year in Kenya by supermarkets alone, which UN Environment says, become trash that will kill birds, fish and other animals that mistake them for food, damage agricultural land, pollute tourist sites and provide breeding grounds for the mosquitoes that carry malaria and dengue fever.

Turning the tide

"Are our oceans dead? I would say they are not dead yet, but they are in deep trouble," says Earle. "Plastic marine litter knows no boundaries and can wash up on any shores, including those of uninhabited islands. It is a global problem requiring a global action."

Earle believes governments should pass laws that discourage the use of single-use plastic such as bags, cups, bottles and the microplastics that are used in millions of items every year. She further suggests incentives for citizens who make choices that limit their use of plastics, such as by using cloth or sisal bags for shopping, adding that countries can also tax those who use plastics and use the money for cleanups.

Big corporations have joined the global effort to turn the tide of marine litter. The technology company Dell announced in February that it has started using recycled plastic fished out of the sea for its product packaging.

More announcements and pledges by countries and organisations worldwide are expected at 'The Ocean Conference' to be held at the UN headquarters in New York on 5-9 June, that will bring together governments, the UN agencies, financial institutions, NGOs, civil society, academia, scientists, the private sector and other actors to assess challenges and opportunities relating to, as well as actions taken towards the implementation of Sustainable Development Goal 14: Life below water.

At the individual level, choosing reusable shopping bags, cups, straws and water bottles, and saying no to personal care products that contain microplastics and plastic packaging can go a long way toward curbing the plastic menace. When it comes to plastics, no action is too small to make a difference.

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