

# Wet, wild and sustainable – how we can save the oceans

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The air in our lungs, the water we drink, our climate and our food supply are all gifts of the ocean, the signature feature of our blue planet. The ocean is what makes this world a shelter for us; we owe much less to the scattering of dry land we tend to think of as Earth. Our survival and greatest dreams thrive on a generous brew of saltwater.

Notwithstanding the recent enormous human tragedy on the Indian Ocean's shores, oceans have also suffered greatly in the past year. Millions of tons of waste have been dumped into the ocean, 100 million tons of fish have been culled for food and nearly 30 million tons of ocean wildlife sharks, sea turtles, albatrosses and dolphins, as well as fish and small creatures nobody wants to eat have been killed in the process. According to the federal Environmental Protection Agency, canned tuna now contains enough mercury to poison unborn children and damage their nervous systems. Oceanographers from the Algalita Marine Research Foundation in Long Beach have discovered that the mass of microscopic plastic fragments in parts of the central Pacific Ocean is six times that of resident plankton. Plastic dissolves and sends hormonedisrupting chemicals up the food chain and into human mothers' milk.

Experts say that during this century, oceans will warm another degree and the sea level will rise another foot enough to disrupt deep ocean circulation, melt more of precious polar icecaps and further stress animals as small as snails and corals and as large as polar bears. Our planet's life systems face serious challenges.

But rather than handwringing despair, hope is on the horizon for Earth and her oceans. The coming decade will emerge as an era for progress in conservation and the culture of sustainability. We are the first generation raised on a culture of interconnectedness, collaboration and sharing. We are the Internet generation. We understand that networks of information connect all living things. We've replaced topdown hierarchical mindsets with resilient, decentralized, horizontal Webwork ways of thinking.

We have breakthrough information, knowledge about life on earth and in the ocean. A combination of spacebased and molecular technologies and interdisciplinary research has deepened our understanding of the oceans. We know that animals migrate 12,000 kilometers between Japan and California, and that deepsea species live without light and oxygen. From space, we measure ocean temperatures in any location at any moment and we can combine and analyze this knowledge using highspeed computers. It's not your highschool biology teacher's ocean any more.

We are a generation that communicates. Scientific papers published in the journal Science today are read around the world in 20 languages. We're not afraid to share and we're mystified by those who don't. Kids no longer have to wait for Jacques Cousteau to make another documentary; the airwaves are full of ocean wonders. Thousands of ocean camps, marine labs, aquariums, kayak

and scuba centers have expert guides who work to promote learning and inspire social change.

We must use this combination of networks, knowledge and communication to address the problems facing our generation, including ocean conservation. Rigorously applied, this synthesis will usher in a generation that understands the importance of sustainability in our dependence on nature. We must seek to further scientific understanding and the solutions it can provide.

Today, World Ocean Day, we are launching the Ocean Revolution, a new wave of ocean advocacy, personal responsibility and local action, in the spirit of John F. Kennedy, a leader and man of the sea who said, "there are some revolutions which humanity accomplishes without quite knowing how, because it is everybody who takes them in hand." Thousands of people who care deeply about the fate of the oceans are joining together to more effectively work to transform our relationship with the sea:

- by choosing local and seasonal sustainable seafood;
- by supporting homegrown and national oceanconservation groups;
- by voting for the greenest candidates;
- by participating in beach and waterway cleanups;
- by reducing personal use of plastics; and
- by celebrating and talking about our oceans and the way they influence us.

Each of us can be part of the ocean revolution – in our own way and as part of the connected whole. Join us. For yourself, each other and the ocean.