

# World view



By Erna Solberg

## Science can boost ocean health and human prosperity

**Political will can unlock the science to benefit the ocean and humanity.**

I grew up on the west coast of Norway and my parents taught me how to fish when I was a little girl. I caught my first mackerel in a boat on the Hardangerfjord, and had it fried for dinner. Such memories become part of you. The ocean is central to Norway's history and culture, economy and diet. We need it to weather existential threats – from the COVID-19 crisis to climate change. As the country's prime minister, it is my job to ensure that our relationship with it is sustainable: protection, production and prosperity go hand in hand.

We cannot do this alone. In September, I went back to the west coast and spent time picking up plastic waste with volunteers. The plastic was from all over, much brought to Norway on ocean currents. Because the biggest threats to the ocean are now global, its safeguarding must be, too.

Perhaps the most notable international achievement to protect the ocean is the marine protected area around the Ross Sea in Antarctica. This 2016 agreement was hard won. More than two dozen nations agreed to preserve ecosystems in Antarctic waters, with 70% off-limits to fishing.

Protection is important to let damaged waters regenerate, but we need more: we can manage the ocean for its vast capacity to drive economic growth and equitable job creation, sustain healthy ecosystems, and mitigate climate change. We need to allow sustainable industries, such as offshore wind turbines and seaweed cultivation, to develop. This demands political will, scientific insight and international cooperation.

That is why, almost three years ago, I set up the High Level Panel for a Sustainable Ocean Economy (the Ocean Panel), which I co-lead with the president of Palau in the western Pacific. This month, all 14 countries on the panel agreed to sustainably manage 100% of their Exclusive Economic Zones (national waters) by 2025, utilizing the ocean without sacrificing its health. Together, the coastlines of Ocean-Panel members comprise almost 40% of all national coastlines worldwide. The agreement covers some of the world's busiest shipping lanes, most-productive fishing grounds and most-enticing tourist destinations.

Why are we making this commitment? The ocean covers 70% of the planet. It can transport goods more carbon-efficiently than air and provide protein more sustainably than land. By one calculation, US\$1 invested in a healthier ocean will reap a \$5 return, but countries must work together to realize that reward. If we fail, it will be costly. Across sectors such as fishing, shipping and tourism, declining ocean health as a result of overexploitation, pollution and climate change could cost the global economy

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more than \$400 billion each year by 2050.

Countries need to hold each other accountable and craft mutually reinforcing policies, such as sharing data and technology to help monitor illegal fishing and pollution. Norway no longer approaches oil, transport, fisheries, aquaculture and minerals separately, but monitors and manages ocean activities across sectors. This helps to establish common data standards, metrics and goals. It also facilitates coordination across government boundaries.

The first business for the panel was building knowledge. We assembled an international, multidisciplinary team of more than 250 experts (nearly half of them women), representing 48 countries or regions. Their work is presented in a collection of papers across Nature titles (see [go.nature.com/3kyd0dx](https://go.nature.com/3kyd0dx)), and a comprehensive report, showing that developing a sustainable ocean economy is both essential and possible.

Rarely has scientific research been so keenly sought by political leaders, or so readily accepted as the basis for policy. The panel members are now translating the scientific evidence and insights into practice. Solutions will vary by country. Norway and Chile have booming aquaculture industries and Fiji has tropical tourist beaches. Portugal and Japan have notable seafood cultures, whereas Indonesia has fisheries and reefs for diving.

But lasting, meaningful progress requires international cooperation. Otherwise, planning will be ad hoc and ineffective, as we have seen in marine sanctuaries that are 'paper parks'. These are marked as protected on a map but in fact are not. The 'high seas', which cover half of Earth's surface, are essentially unprotected.

It will take time for the benefits to become apparent. In 2017, I joined with philanthropist Bill Gates to launch the Coalition for Epidemic Preparedness Innovations, aimed at developing vaccines for pandemics. Only now are we seeing that work pay off, in accelerated COVID-19 vaccine development and distribution.

Critics might counter that more than 14 countries benefit from and exploit the ocean, some of which are bigger contributors to ocean problems and have more wherewithal to solve them. Still, we must start somewhere, and together we are bringing sustainability to nearly 30 million square kilometres of ocean. We are hopeful our ranks will grow over time, because the benefits of better management are beyond doubt. Sceptics might suggest that the Ocean Panel is just a way for countries to burnish their images. But if sustaining the ocean boosts a country's image, that can only be a good thing.

The proof of our efforts will be in ocean services: fishing, recreation, emissions absorption and the creation of decent jobs. Ocean protection and productivity are inseparable.