ECONOMIST IMPACT

World Ocean Summit

# Ways forward from ocean acidification and the harms of pollution

March 11th-13th 2024 | Lisbon

Supported by

Back to Blue

An initiative of
Economist Impact and The Nippon Foundation

**World Ocean Summit**
Ways forward from ocean acidification and the harms of pollution

From March 11th to 13th 2024, the World Ocean Summit returned to Lisbon for its 11th year, bringing together a cross-section of global stakeholders to discuss how to continue building an ocean economy that supports conservation and sustainable use of the marine environment.

This year the agenda focused on ocean health, industry strategies and solutions that address both ocean and climate. As part of this, sessions supported by Back to Blue, an initiative of Economist Impact and The Nippon Foundation examined how to combat ocean acidification at the country level, along with plans to eliminate the harms of marine pollution, before announcing plans for next year's summit.

**"Ocean acidification is a global issue, but it needs local solutions and local actions."**

**Naka Kondo**
Editorial lead, global initiatives,
**Economist Impact**

# Developing clearer national ocean-acidification action plans

## What is ocean acidification?

A strategy session on ocean acidification (OA), moderated by Naka Kondo, editorial lead for global initiatives at Economist Impact, began with a briefing on the scientific aspects of the phenomenon. Since the Industrial Revolution, humans have initiated 2.3trn tonnes of $CO_2$ emissions, explained Steve Widdicombe, director of science and deputy chief executive at the Plymouth Marine Laboratory (PML). As the ocean mitigates climate change by absorbing around a quarter of our emissions, its pH levels drop, as confirmed by satellite data in patterns that closely follow terrestrial warming. Acidification is happening more quickly in coastal areas, which interact with rivers and the seabed.

"Our open oceans are now 40% more acidic than they were before the start of the Industrial Revolution," said Professor Widdicombe. "Pretty scary stuff." The phenomenon is expected to have a pervasive impact on marine biology and the "ecosystem services" they contribute to human development.

**World Ocean Summit**
Ways forward from ocean acidification and the harms of pollution


## Combating ocean acidification from the international to the subnational level

What, then, is to be done? Kirsten Isensee, a programme specialist in carbon sources and sinks from the Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO), explained the multilayered approach that is being taken to combat OA, from the international to the subnational level.

With 150 member states, IOC/UNESCO has actively pursued ocean acidification research and capacity-building since 2004. Its establishment of the Global Ocean Acidification Observing Network in 2012 was a significant milestone, enhancing scientific understanding and detection of OA.

Reflecting on Sustainable Development Goal (SDG) 14.3, to "minimise and address the impacts of acidification", Isensee described efforts to go beyond detection towards mitigation. The Ocean Decade for Sustainable Development programme aims to unite scientific insights with the engagement of industry stakeholders and policymakers, putting current knowledge to use in addressing the problem.

**"It's up to countries… to do the observations, and plan and strategise around the actions, to actually fulfil these commitments we have at the international level."**

**Kirsten Isensee**
Programme specialist, carbon sources and sinks, **IOC/UNESCO**

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention), managed by the OSPAR Commission, plays a regional role in safeguarding the marine environment, including against OA and climate change. Carole Durussel, the deputy secretary of the commission, explained how with 16 contracting parties including the European Union, it aims to deliver a resilient marine ecosystem in the North-East Atlantic. As seen in the assessment of OSPAR's 2021 Quality Status Report, OA is happening across the area covered by the convention, with conditions projected to worsen under the IPCC's worst-case climate change scenarios. A newly formed working group of the commission focuses on strategies for improving OA awareness, monitoring and mitigation.

The discussion then zoomed in from regional to local action against acidification. Sandra Kilroy, senior director for environment and sustainability at the Port of Seattle, told how the effects of OA on oyster aquaculture and crab fisheries in the Pacific Northwest contributed to national legislation to advance OA research, along with ocean action plans under the Biden administration. As a large landowner, the port was able to join the International Alliance Against Ocean Acidification (OA), crafting a local action plan focused on coastal restoration and the decarbonisation of transport. The port's story shows how local entities can move faster than national governments, serving as "role models and test beds for experiments" that promote broader adoption and the scaling up of successful strategies.

Professor Widdicombe endorsed national action plans on OA. Since the issue is less recognised than other marine stresses, plans help raise awareness and understanding of how to manage OA—a problem that involves both climate change and pollution (eg, agricultural run-off). Action plans can underpin targeted and well-informed efforts that tackle OA with locally appropriate solutions.

Considering the United States' national plan, Ms Kilroy highlighted the role it plays in focusing and securing funding for mitigation efforts. "Having that national policy really creates the momentum to make change," she said, pointing to the Bipartisan Infrastructure Law and the Inflation Reduction Act as having mobilised substantial investment in clean energy infrastructure.

For Isensee, national action plans work to bridge the gap between international commitments on OA and their local implementation. In key global frameworks like the UN climate change convention and the 2030 Agenda for Sustainable Development, responsibility for achieving goals falls to individual countries. National action plans facilitate collaboration between stakeholders—from government ministries to local institutions and academia—so that diverse capabilities converge to meet global commitments through on-the-ground action.

## What each organisation can do to catalyse solutions

These representatives of IOC/UNESCO, OSPAR and the Port of Seattle each detailed their organisations' strategies against OA. IOC/UNESCO is building member states' ability to measure and address ocean acidification, moving "from science to action", and is launching a project to streamline biological observations of OA. OSPAR is a platform that brings stakeholders together to address OA at the regional level, emphasising cross-boundary co-operation and the sharing of best practices. The Port of Seattle, meanwhile, takes local action with initiatives like a "blue carbon" pilot project that is testing the ability of environmental rehabilitation to address OA and sequester carbon, and is investing in the electrification of the waterfront and the development of clean fuels to enable decarbonisation.

To finish on a positive note, panellists left the audience with their recommendations on how people can tackle OA personally. Widdicombe of the PML suggested using personal and professional skills to contribute to efforts against OA. Through the UN-endorsed Ocean Acidification Research for Sustainability (OARS) programme, a call for commitments lets people tell the community what they and their organisations plan to do. OSPAR will be contributing an OARS commitment in April, and Ms Durussel urged listeners to do the same.


**"I know you're not powerless, because you've been bringing your skills to bear… So the key thing now is asking ourselves what we can bring to this problem to create something better."**

**Steve Widdicombe**
Director of science,
**Plymouth Marine Laboratory**

Ms Kilroy of the Port of Seattle challenged people to ask what their local government is doing about OA, and to help work out how to make ocean solutions less risky so they can be more readily financed. Isensee of IOC/UNESCO urged those involved in the collection of data on the ocean to make it openly accessible.

## Ocean acidification: an interview with Jessie Turner

Jessie Turner, executive director of the OA Alliance, gave further detail on what can be done to avoid the worst effects of OA on marine life, livelihoods and economies. In an interview with Charles Goddard, editorial director at Economist Impact, she explained how OA is increasingly recognised as an issue by global policymakers due to "the dedicated work of several initiatives and science collaboratives" over the past 10-15 years. Acknowledgement of OA in UNFCCC documents, the SDGs, the Convention on Biological Diversity and the High Seas Treaty is cementing its relevance to strategies for reducing emissions and adapting to climate change.

As the visibility of OA increases, policymakers need to go beyond carbon reductions to look at mitigating its effects. "We can and we have to do more to demonstrate OA policy and investments," Ms Turner said.

**"The big challenge we have been facing in bringing OA to the forefront of the global agenda is twofold… The first one is [that] many global policymakers genuinely don't understand OA causes, drivers and impacts. Secondly, a lot really don't know that there's anything we can do… locally, outside of reducing emissions."**

**Jessie Turner**
Executive director,
**OA Alliance**

Elevating the prominence of OA in the global policy agenda will take greater awareness among policymakers and other stakeholders not only of its causes and effects, but also of the full range of possible responses. Then they need to move beyond awareness to action.

Ms Turner elaborated on how national OA action plans can help governments "better understand the impacts of OA in their own regions" as they work to devise strategies for mitigation, adaptation and building resilience. Addressing the localised effects of acidification is an important part of these plans.

Moving up a level, regional programmes like those of OSPAR act as models for collaborative action. OSPAR's 2023 OA assessment showed how regional efforts can integrate scientific assessments into policy. She also cited initiatives in a similar vein that are underway in the South Pacific, the Indian Ocean and Africa.

Ms Turner made two calls for action in expanding work on OA, asking for engagement with the UN Decade of Ocean Science OARS programme and the OA Alliance National Action Planning Leadership Circle, which invites governments to work with the alliance to establish unique OA action plans ahead of the UN Ocean Conference in 2025.

## A roadmap for addressing ocean pollution

Mr Goddard returned to introduce an important piece of recent progress in addressing ocean pollution. "A Global Ocean Free from the Harmful Impacts of Pollution: Roadmap for Action" is a collaborative effort of the Back to Blue initiative, led by Economist Impact and The Nippon Foundation, with input from stakeholders in the UN system, science, industry policy and finance.

The roadmap proposes an approach to tackle ocean pollution that goes beyond plastics to include nutrients, chemicals and pharmaceuticals, most coming from land-based sources. It calls for a high-level global multi-stakeholder co-ordinating task force and a five-yearly Global Ocean Pollution Assessment and Action Plan, aiming to deepen understanding of the problem and spearhead effective interventions. The roadmap looks for wide stakeholder engagement, including from national governments, scientists, businesses and campaigners.

**"The roadmap is an attempt to draw together stakeholders in the process of understanding what the pollutants are, where they are in the ocean, and to what extent they have an impact."**

**Charles Goddard**
Editorial director,
**Economist Impact**

Further recommendations include establishing a secretariat to support the task force on ocean pollution, creating stakeholder groups for science, data, policy, and business and finance, and convening a network for collaborative action. IOC/UNESCO and the United Nations Environment Programme are potential lead organisations in co-ordinating the task force and secretariat.

Short-term goals would work towards a "zero-pollution ocean" by 2050, with milestones around closing information gaps by 2030. Over the next year, Back to Blue will work with stakeholders to refine the draft roadmap in the hope it will be adopted into the global policy agenda at the UN Ocean Conference in 2025.

All this will help fight what Mr Goddard characterised as the "forgotten third" of a triple planetary crisis also including climate change and nature loss. Relative to the other two components, there is a distinct lack of data on the extent and impact of ocean pollution. Despite progress made in this area through initiatives supported by organisations such as The Nippon Foundation, much is still unknown about the full effects of pollution on marine ecosystems and human health.

Mr Goddard urged stakeholders to download and review the roadmap, give feedback, and think about how they can engage with it. He stressed the urgency of building an evidence base for informed decision-making, and the critical need to address pollutants beyond plastics.

## Looking ahead to the World Ocean Summit 2025

On the last day of the summit, Mr Goddard interviewed Yohei Sasakawa, chairman of The Nippon Foundation, which will be the official host of the World Ocean Summit in Tokyo in 2025. Mr Sasakawa, aged 85, had just completed a climb of Mt Kilimanjaro, motivated by the foundation's long-standing and successful mission to eliminate leprosy. Atop Africa's highest peak, he unfurled a banner urging the world not to forget leprosy, as a start to further activities on the continent. Given his age and having a pacemaker, he playfully contemplated the possibility of a Guinness World Record for the climb.

**"We're calling on government policymakers, we're calling on UN agencies, and on business and finance leaders, scientists and others to take action to ensure the roadmap is implemented and its vision can be realised."**

**Charles Goddard**
Editorial director,
**Economist Impact**

**World Ocean Summit**
Ways forward from ocean acidification and the harms of pollution

Reflecting on the inception of the foundation's ocean programme, Mr Sasakawa contrasted humanity's focus on space with its comparative disdain for the ocean, which covers 70% of Earth's surface. "The ocean has remained neglected for long years," despite escalating pollution, with the need for conservation now a "matter of life or death".

Our environmental impact has "brought this world to such a critical condition", where both climate change and ocean acidification are among the pressing issues. For the sake of future generations, "we need to seriously think about how we can maintain or at least conserve this Earth." He called for a pivot from exploration to preservation, and sees the foundation's long-term commitment to ocean science as crucial to human survival.

Mr Sasakawa hoped that the World Ocean Summit 2025 would be a pivotal forum for expert dialogue, heightening public awareness on the state of the environment and mobilising the global population to act. As an example of innovative ways to engage the public, he described Spogomi, an international garbage-collection competition whose inaugural world championship was held in 2023, raising awareness of pollution and changing habits.

The Nippon Foundation, which is Japan's largest philanthropic organisation, will bring the 2025 summit to the heart of a national blue economy that is forecast to reach 28trn yen in value by 2030. With many of the challenges facing the ocean at their most urgent in Asia, next year's setting will inform meaningful discussions on topics such as marine conservation, sustainable fisheries and the impact of climate change on coastal communities, along with efforts to address harms from plastics, chemicals and acidification.

**"When we think of the ocean, this is a matter of life or death for people. The question arises as to how many years people can live on this Earth if we just keep on… Is it a thousand years or several tens of thousands? I think the ocean has to be conserved."**

**Yohei Sasakawa**
Chairman,
**The Nippon Foundation**

**World Ocean Summit**
Ways forward from ocean acidification
and the harms of pollution

## Key takeaways

**Ocean acidification (OA) and climate change are linked.** The ocean's pH drops as it absorbs more $CO_2$ from the atmosphere, meaning that reducing emissions is among the most important ways of tackling the problem.

**A multilayered approach is needed to address OA, involving action at the global, regional, national and subnational levels.** Global research and capacity-building initiatives, regional conventions, national action plans and on-the-ground local action all play a role.

**Mitigation is an important next step.** As they integrate scientific assessments into policy, policymakers need to look at the full range of possible responses—not just reducing emissions but also responding to the effects of inevitable acidification..

**There is a global roadmap for reducing the harms of ocean pollution.** A draft plan produced by the Back to Blue Initiative recommends establishing a co-ordinating task force, a secretariat to support it, and five-yearly assessments and action plans. Now is the time to review the roadmap and give feedback.

**The World Ocean Summit 2025, to be held in Tokyo, will continue dialogue on the state of the ocean environment.** In a region where many ocean challenges are at their most urgent, the setting within an important maritime nation will inform discussions on topics such as marine conservation, sustainable fisheries and efforts to address the harms of pollution.

Economist Impact
Economist Impact is a part of The Economist Group, publisher of *The Economist* newspaper. Sharing *The Economist*'s commitment to informed, impartial and independent debate, we are recognised the world over as a leading provider of highly interactive meetings—including industry conferences, private gatherings and government roundtables—for senior executives seeking new insights into important strategic issues.

Economist Impact's World Ocean Initiative is a mission driven project that supports the development of a sustainable ocean economy by addressing the greatest challenges facing our seas: climate change, biodiversity loss and pollution. Year-round and at our flagship World Ocean Summit, we inspire bold thinking, enable new partnerships and explore the most effective action for a healthy blue planet.

The Adelphi, 1-11 John Adam Street, London WC2N 6HT, United Kingdom
events.economist.com