

The
Economist

Events



EXECUTIVE SUMMARY

WORLD OCEAN

S U M M I T

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BLUE ECONOMY, BLUE GROWTH?

KEY POINTS

- A new landscape of opportunity in the ocean is emerging, characterised by collaboration between business, policymakers and scientists.
- We can now monitor and understand—and therefore protect and profit from—the ocean and its resources in a way that was never possible before.
- Regulation must be science-based, transparent and above all enforced if we are to develop a genuine blue economy.
- Damaged ocean ecosystems can recover and become economically viable if they are managed properly.
- The finance community must play a significant role, but the necessary investment is not yet underway.
- Developing economies have an opportunity to leapfrog the rich world.

COLLABORATION AND OPPORTUNITY

A new landscape of collaboration and opportunity is emerging. Businesspeople, policymakers, scientists and conservationists are working together in novel ways, driven by the shared conviction that the ocean can be a source of economic growth but that its resources must also be protected for the future. More than 350 of these stakeholders gathered in Cascais, Portugal, from June 5th to 7th 2015, for the third World Ocean Summit.

INNOVATION AND TECHNOLOGY

We can now monitor and understand—and therefore protect and profit from—the ocean and its resources in a way that was never possible before. New technologies facilitate science-based policymaking and better enforcement of regulation; they also enable industry to make informed decisions and adjust their business practices as needed. “Best practice” in ocean-facing industries means using technology to increase profits while protecting the environment that business operates in.

Technology now exists to monitor ocean pollution, and similar surveillance of fishing is increasingly possible. Businesses, governments and NGOs working to protect fisheries are beginning to invest heavily in surveillance technologies, said Brian Sullivan, program manager for Google Ocean, whose satellite technology enables regulators to see real-time, moving maps of fishing boats at sea. Governments have traditionally tried to enforce regulations using their own (often limited) data, but this may be changing, Mr Sullivan said. Data is becoming more widely shared, and collaborative monitoring tools more readily available.

Technology that monitors the ocean’s health and the industries that operate in it has marketable applications that go well beyond enforcement of regulations, Mr Sullivan argued. Market-leading retailers want to please their customers: for example, if consumers will pay a premium for fish caught from sustainably managed fisheries, the businesses that serve them will gladly source data to prove their products’ providence. “We have to understand the environment in order to understand the impacts,” noted Alex Rogers, professor of conservation biology at the University of Oxford.



ON THE GROUND AND IN THE WATER

Kathryn Sullivan, under-secretary of commerce for oceans and atmosphere, United States Department of Commerce

HOW IMPORTANT IS IT TO COLLECT GOOD AND DEPENDABLE DATA FOR THE “BLUE ECONOMY”?

We have a huge challenge in improving the data we have about the ocean, and the use and accessibility of that data. All of the talk about an emerging blue economy—in whatever sector you speak about—is predicated, in most cases, on the notion [that we are doing] the right thing in the right way, so that it’s sustainable. How do you know? What baseline do you have? And, as you continue some activity for three, or five, or ten years, is there some way you’ve equipped yourself to confirm you’ve got it going in the right way? That you are managing it well? That you are not taking out next year’s production prematurely?

It all comes down to thinking ahead, about what kind of data and information we should arm ourselves with to tackle those kinds of questions. On some parts of the ocean, there is a fair amount of data now. Let’s be sure we are putting that data to good use.

But in many parts of the ocean, data is very sparse. We really have to start a step ahead and think about how we make sure that we can answer these questions five or ten years down the road. We need to know that we are on a good, sustainable track, or to see the warning signs of something we need to take care of.

WHAT ARE YOUR PREDICTIONS FOR THE “BLUE ECONOMY” IN 2016?

My blue-economy prediction is that I think it’s a fair prospect, in 2016, to see some on-the-ground, on-the-bottom, in-the-water activity in a very different segment of the blue economy than we’ve seen before. Fishing, shipping, travel, tourism, biotechnology—these are established but growing sections of the blue economy. There is a real prospect in 2016 that we will start to see significant activity around [new industries]—seabed mining, for example—which will be a very new and different thing for the world to take stock of.



“We need regulation; we need new standards.”

Knut Nesse
Chief executive officer
Nutreco

REGULATION AND ENFORCEMENT

Regulation must be science-based, transparent and above all enforced if we are to develop a genuine blue economy. “We need regulation; we need new standards,” said Knut Nesse, chief executive officer of aquaculture company Nutreco. “High standards keep the cowboys away,” agreed Shontel Norgate, chief financial officer of Nautilus Minerals, a seabed mining company. “We need to have fair competition,” said Roger Strevens, chairman of the Trident Alliance. “Environmentally, we face big challenges. [Businesses] can handle the costs of being environmentally responsible, but everyone must be on the same page. The role of enforcers [must] change. Traditionally, they look out for the public and environmental interests. They should accept their responsibility in maintaining fair competition.”

Leo Abruzzese, global director of public policy for the Economist Intelligence Unit, outlined the findings of the new Coastal Governance Index, which ranks ocean-facing economies based on their policy capacity, business environment and protection of assets such as water, minerals, land and living resources. High-income, democratic countries including New Zealand, the United States, France, Spain, Japan and Norway top the index, suggesting that inclusive policymaking and strong institutional capacity are the keys to effective governance of coastal areas. Yet while individual countries can regulate, protect and develop their coastal

economies, regulation of the high seas is much more difficult. “We have a global environment. We have global issues. We need to come up with global solutions, and, above all, we need global implementation,” noted Mario Aguilar, national fisheries commissioner of Mexico.

RESTORING DAMAGED ECOSYSTEMS

Damaged ocean ecosystems can recover and become economically viable if they are managed properly. It is possible to develop a sustainable ocean economy, even in areas that have been overexploited. But the new, “blue” economy must look quite different to the old ocean economy if it is to be viable in the long term.

To secure the future of fisheries, it is important to look at them strategically, the summit heard. New research shows that the medium- and long-term viability of the sector is at risk. “The world is losing \$72 billion [per year] from ineffective fishery management,” said Paula Caballero, senior director of the global practice for environment and natural resources at the World Bank Group. To combat this, rules at sea, in port and at the table must change.

Research released by the Environmental Defense Fund at the World Ocean Summit finds that with proper management, most fisheries can biologically recover and become more profitable in less than ten years. This research can help guide decision-makers, fishing communities, and seafood companies as they develop sustainable fisheries that will be more profitable and

productive over the long term, said Amanda Leland, vice-president of oceans at the Environmental Defense Fund. “The biggest near-term opportunities are working with communities and governments to change the way fisheries are managed. For example, the Belizean cabinet voted in 2015 to take a new nationwide management approach to fisheries after 3,000 fishermen called for action. They saw hope, for the first time in a long time, about a future that can be better for them, be better for their community, and can lead to them having a more resilient and productive coral reef for the long term,” Ms Leland said.

For ocean-facing countries, unsustainable fishing could have devastating economic and human costs. “Two-thirds of Indonesian territory [is] underwater,” said Susi Pudjiastuti, Indonesia’s minister for marine affairs and fisheries, stressing the need to “invest in revitalisation and fisheries reform”, and to change the attitudes of fishers and consumers alike. Continuing present fishing practices, without regard for marine conservation or respect for reservations, and solely with a view to profit, would have devastating effects. It is no wonder, then, that many countries are investing in change.

In conjunction with sustainable wild fisheries, aquaculture too provides hope for long-term food security. In 2014, for the first time, consumption of fish from aquaculture exceeded consumption of wild-caught fish. “If we want to have a sustainable future in food, we need to have sustainable aquaculture,” said Knut Nesse of Nutreco. “Farmed fish has a low carbon footprint, good feed conversion, and is healthy. It needs to be higher on the ocean agenda.”

CREATING VIABLE FINANCING MECHANISMS

Substantially greater investment will be required if the existing ocean economy is to transition to a sustainable “blue economy.” The finance community must play a significant role, but the necessary investment is not yet underway. “The world is awash with capital,” said Sean Kidney, chief executive officer of the Climate Bonds Initiative. Yet, to bridge the gap between investor capital and ocean conservation projects, conservationists must think like investors and help them meet their institutional needs.

To successfully attract capital, project proposals must include long-term cash flow projections and should focus on reducing investors’ risks, said Mark Tercek, chief executive officer of the Nature Conservancy. Proposals cannot focus solely on the project’s social and environmental impact. We must find sources of cash flow in the marine habitat to service debt. Recovered fisheries, user fees and green infrastructure that offers protection from rising sea levels and storms are all investment opportunities that can create returns for investors. We now need to create good projects, raise capital for them, and show stakeholders such as investors, conservationists and governments how these examples can accelerate progress, Mr Tercek argued.

The ocean community should learn from the development of “green” financial investment vehicles to drive investment into “blue” projects. Citing the growth in investor appetite for green bonds, a market that has

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grown tenfold to over \$36 billion in the last three years, Mr Kidney suggested that low-risk investment opportunities should be the norm until investors become comfortable with blue investments. As the sector builds a track record, the appetite for higher-risk deals will grow. John Tobin de le Puente, managing director and global head of sustainability at Credit Suisse, agreed that projects must be low-risk to provide investors with a sense of security. But the issue of risk is complex, added Justin Mundy, director of the International Sustainability Unit of the Prince's Charitable Trust. Each country and jurisdiction presents its own unique set of risks, and these must be mitigated in different ways.

Ultimately, the growth of investor appetite for blue investment opportunities will depend on governments' ability to create a lower-risk investment landscape by strengthening and enforcing regulation. “We have a systemic problem and need a systemic solution,” Mr Mundy concluded.

INCLUSIVE DEVELOPMENT

Developing countries will play an increasing role in the blue economy. By adopting data-driven policymaking and best-practice business methods, developing economies have an opportunity to leapfrog the rich world. Environmental conservation must be balanced

against the need for human and economic development, especially in poorer places. Yet for developing economies to benefit in the long term, ocean resources must be protected from overexploitation.

In a Facebook discussion convened ahead of the World Ocean Summit, Cecilia Reyes, chief investment officer and regional chairman for the Asia-Pacific at Zurich Insurance Group, observed that an estimated 61% of the world's population lives within 10 miles of the ocean. Many of those people are in emerging markets, and to many the ocean is a vital economic pillar on which food, resources, transport, income and recreation all rest. The blue economy is not only relevant to the ocean, but represents a more general move towards a new, sustainable economy that can benefit everyone. The need for this is more pronounced in emerging markets, where there is greater reliance on resource rents, and as a result greater vulnerability to problems of overexploitation, pollution and even piracy. Lower regulatory standards and softer environmental laws exacerbate these issues.

Yet emerging markets also have the chance to leapfrog the developed world. Developing countries such as Malaysia, Indonesia and the Maldives have been pioneers in eco-tourism.



THE OCEAN INNOVATION CHALLENGE

The inaugural Ocean Innovation Challenge, hosted in cooperation with Blancpain, called for pioneering minds to offer solutions that alleviate the tension between growth and sustainability. We invited the creators of scalable, economically viable and environmentally sustainable innovations, who strive to create or enhance business practices, industries or technologies that contribute to the long-term health of our ocean, to submit a brief video showcasing their innovation. We received more than 65 entries from businesses and individuals, and invited three finalists—Liquid Robotics, Eyes on the Seas, and RightShip—to present their innovation live to a panel of three impact investors at the World Ocean Summit.

The winning entry was Liquid Robotics' energy-efficient Wave Glider, an unmanned ocean robot that collects real-time data. On his firm's behalf, chief technology officer Roger Hine accepted a commemorative Blancpain timepiece at the World Ocean Summit's gala dinner. "We need constant innovation to have new ideas to protect and to help the ocean," Blancpain vice-president Alain Delamuraz said as he presented the award. "There is no future without innovation."

"This sort of process is invaluable," agreed Adam Anders, managing partner of Anterra Capital and one of the panel of three judges. "This event is fundamental because there are some very powerful ears and eyes [here]. The winner of this challenge will be able to make progress on their vision."



In the Philippines, small, sustainable fishing companies feed fish certified by the Marine Stewardship Council into the global supply chain. Small and developing island countries are engaging in strong climate-change advocacy.

For developing countries to effectively seize the available opportunities, wealthy economies must share resources and knowledge with them. "It is very important to create partnerships with the rest of the world. We can learn lessons from them," said Nkosazana Dlamini-Zuma, chairperson of the African Union Commission. "Creating partnerships [will be crucial] as we develop Africa's economy and train our young people. Sixty percent of our population is under 35, so if we [educate and train them on] the oceans, not only will they carry this into the future, but it means we will have [greater] capacity for [development]. We must also take advantage of new technologies so that we can leapfrog [the developed world] as we've done with mobile phones. Lots of Africans didn't have phones, but now we are the second-biggest consumer."

THE NEW BLUE ECONOMY IS DIFFERENT TO THE OLD OCEAN ECONOMY

What is the difference between the ocean economy and the blue or sustainable ocean economy? Is it simply that a sustainable ocean economy is one where the environmental risks of, and ecological damage from, economic activity are mitigated or significantly reduced? Is it enough that future economic activity minimises harm to the ocean?

Alongside established ocean industries, emerging and new activities—offshore renewable energy, aquaculture, deep seabed mining and marine biotechnology—will bring new opportunities, growth and greater diversity to the ocean economy. Governments, too, are playing a key role in driving growth. But can the concept of the blue economy be more than aspirational? According to Assunção Cristas, Portugal's minister of agriculture and sea, it can. "The question," she says, "is how to create wealth without compromising the health of the oceans."

A MODEST TSUNAMI?



By Ove Hoegh-Guldberg, director, Global Change Institute, University of Queensland

Our ocean nurtured the beginning of life on our planet, and today remains central to almost everything we do. We recently estimated the asset value of the ocean at \$24 trillion, delivering a \$2.9 trillion benefit to humanity each year. These resources will become ever more valuable as opportunity and resources dwindle on land. To feed a global population of 7 billion people, we will increasingly turn to the ocean. Yet there is abundant evidence that the health of the ocean and its resources are rapidly declining.

Participants came together at the first World Ocean Summit in 2012 in Singapore because of this concern. The first of a kind in bringing politicians, businesspeople, conservationists and entrepreneurs together, this inaugural summit blazed the beginnings of a trail that is likely to become increasingly important to humanity's future.

The third and latest World Ocean Summit hosted a power-packed series of presenters that included presidents, ministers, CEOs, artists and leading scientists. Amid the beautiful Portuguese coastal landscape, which constantly reminded us of the opportunity and peril under consideration, it was pleasing to see how the discussion has evolved. Discussions at the first summit focused on describing the problems and imagining the solutions;

in 2015 the discussion had moved on to the solutions' architecture and implications. While significant examples of existing blue solutions evaded us, there was a general feeling that people and industries were beginning to transform, in a landscape of collaboration and opportunity. This supportive environment is critical if a paradigm shift is going to happen in how we view and exploit the ocean.

It is also crucial that investment opportunities are "de-risked" to encourage investment on the scale needed to transform the ocean and its abundant opportunities and resources. There was a strong perception among participants at this year's summit that we need to adopt "learning through failure." Others highlighted the need to balance environmental impact, political risk and sector capacity so that failure can be absorbed. Many participants advised caution: we must ensure that people and communities are protected in the "blue rush" many anticipate as land-based resources dwindle and we look to the ocean for solutions.

As a scientist who has participated in all three World Ocean Summits, I couldn't help feeling that a modest tsunami in the development of our blue economy may be near. Within this landscape, science remains a critical element as we take on the last frontier of our planet. We know much less about the ocean than we do about our moon. Opportunity and success will be driven by our knowledge and understanding of the vast ocean resources that lie at our feet. Many of us hope that we will act in a clever and sustainable way that keeps people, ecosystems and business in balance.

