

WORLD OCEAN SUMMIT 2017

FINANCING THE SUSTAINABLE OCEAN ECONOMY

February 22nd-24th 2017 Sofitel Bali Nusa Dua Beach Resort, Bali, Indonesia

The transition from a conventional economy in the ocean to a sustainable ocean economy could be a tremendous economic and investment opportunity, if done right. The risks and challenges are considerable. A new and intensive phase of economic activity in the ocean is getting underway just as the science warns that the seas are facing unprecedented pressures from humans, and that time to salvage them is fast running out. Given all the talk of aligning economic activity with the ocean's health, the gap between the two remains wide, and may be widening. The so-called "blue economy" is at risk before it has been properly established.

Nonetheless, there is no shortage of forward-thinking businesses, governments and ocean advocates exploring the sustainable ocean economy. Established marine industries such as shipping, oil & gas and fishing are being pressured and reshaped by changing consumer and investor preferences, greater regulation and, in some, a perceptible shift towards greater stewardship of the ocean environment and more sustainable business practices. A raft of new activities—renewable energy, sustainable aquaculture, ecotourism and "grey-green" coastal infrastructure, for example—offer opportunities for sustainable investment that aim to do less or no harm to the ocean, or even to profit from reversing damage to ocean ecosystems.

Ensuring greater stewardship and sustainable practices among existing ocean activities, while bringing new endeavours to scale are challenges that require vision, new modes of governance, bold regulatory and behaviour changes, and, of course, large amounts of money. In the public sector, the transition will involve sizeable spending on reforms to institutions and laws, and on effective monitoring and enforcement. Private-sector investors will need to develop a greater awareness of the opportunities and risks involved in the sustainable ocean economy.

New investment frameworks and financial tools will be essential to develop and govern the new ocean economy in a sustainable way. Continuing with business as usual poses great risks. In our fourth World Ocean Summit, the ambition is to spark a vital new dialogue on financing the transition to a sustainable ocean economy. How large is the opportunity? What are the risks involved? What investment frameworks might be necessary? What capital is available, and how can it be scaled up?

Conference chair Zanny Minton Beddoes, editor-in-chief, *The Economist*

Moderators Andrew Palmer, business affairs editor, *The Economist*
Charles Goddard, executive director, World Ocean Summit
Daniel Franklin, executive editor, *The Economist*
Dominic Ziegler, "Banyan" Asia columnist, *The Economist*
Miranda Johnson, environment correspondent, *The Economist*

<p>PROGRAMME OVERVIEW REGISTRATION: February 22nd 2017</p>			
<p>Welcome cocktail reception and film screening</p>			
<p>DAY 1: February 23rd 2017</p>			
<p>Keynote interview; plenary panels focusing on financing; strategy sessions; Ocean Innovation Challenge winner announcement; and the ocean on film</p> <ul style="list-style-type: none"> • The ocean economy—A whale of an opportunity • The ocean business—The path ahead • Launch of the United Nations Marine Campaign • Financing the sustainable ocean economy • Ocean Innovation Challenge finalists' presentations and winner announcement • The Ocean Conference and SDG14 • The ocean on film: a conversation with Adrian Grenier 			
<p><i>Strategy 1</i> Emerging risk, investment frameworks for the ocean</p>	<p><i>Strategy 2</i> Plastics and solid waste: Local solutions to a global problem</p>	<p><i>Strategy 3</i> Financing sustainable fisheries</p>	<p><i>Strategy 4</i> Scaling up investment in sustainable aquaculture</p>
<p>DAY 2: February 24th 2017</p>			
<p>Plenary panels on climate change and the ocean, the tech revolution, China's ocean policy; strategy sessions; The world if; What comes next? Closing remarks</p> <ul style="list-style-type: none"> • Climate change and the ocean---what the science says • COP this---the ocean and climate-change policy • Assessing climate-change risk in the ocean • The next generation • Tech revolution • Climate change case study: decarbonising shipping • Spotlight interview: China and the ocean economy • The world if...? • What comes next: A call for commitments 			

<i>Strategy 5</i> Risky business: Climate- change risk and financing	<i>Strategy 6</i> Slow ahead: Financing the transition to sustainable shipping	<i>Strategy 7</i> Stand or retreat? Responding to sea-level rise	<i>Strategy 8</i> Business so blue: Pushing renewable energy in the sea
--	---	---	---

REGISTRATION AND OPENING COCKTAILS

11.00am	<i>Registration opens</i>
---------	---------------------------

Welcome cocktails

6.00pm	Welcome cocktail reception
7.00pm	Welcome remarks Charles Goddard, executive director, World Ocean Summit
8.00pm	Film screening Premiere of two short documentary films by <i>The Economist</i> : 'Savings Corals' and 'The Deep'.
9.00pm	Close

DAY 1: FINANCING THE OCEAN ECONOMY	
8.00am	Registration and refreshments
8.45am	<p>Chair's opening remarks</p> <p>Zanny Minton Beddoes, editor-in-chief, <i>The Economist</i></p>
9.15am	<p>The ocean economy—A whale of an opportunity?</p> <p>Ocean policies are being re-written with an eye to the huge potential of the ocean economy, though often with insufficient attention to the escalating stresses on marine ecosystems. The potential gains—and risks—are great. Ministers from key ocean states discuss their evolving ocean policies, balancing growth and ocean health, and the public and private financing needed to do so.</p> <p><i>Speakers</i> Anwar Hossain Manju, minister of environment and forests, Bangladesh Karmenu Vella, commissioner for environment, maritime affairs and fisheries, European Commission Luhut Binsar Pandjaitan, coordinating minister for maritime affairs, Indonesia Ana Paula Vitorino, minister of sea, Portugal</p> <p><i>Moderator</i> Dominic Ziegler, “Banyan” Asia columnist, <i>The Economist</i></p>
10.00am	<p>Indonesia's ocean and maritime agenda</p> <p><i>Welcome remark</i> I Made Mangku Pastika, governor of Bali, Indonesia</p> <p><i>Speaker</i> Jusuf Kalla, Vice-president, Indonesia</p> <p><i>Interviewer</i> Zanny Minton Beddoes, editor-in-chief, <i>The Economist</i></p>
10.30am	Networking break
11.00am	<p>The ocean business—The path ahead</p> <p>Global business leaders on the growing ocean economy, the prospect of</p>

	<p>increasing regulation and ocean management, heightened expectations from investors and consumers, and how to square the declining health of the ocean with the search for profit.</p> <p><i>Speakers</i> Jan Dieleman, president, ocean transportation, Cargill Patrick Thomas, chairman and chief executive officer, Covestro Adam Goldstein, president and chief operating officer, Royal Caribbean Cruises Rob Walton, board member and environment programme chair, Walton Family Foundation</p> <p><i>Moderator</i> Daniel Franklin, executive editor, The Economist</p>
<p>11.50am</p>	<p>Financing the sustainable ocean economy</p> <p>The global shift underway in green financing has yet to turn 'blue'. Yet innovative vehicles for investing sustainably in the ocean appear to be proliferating. The challenge is one of scale. Such investments lack precedent and clear risk profiles, and mainstream investors are either wary or unaware. How might 'blue' financing take its place alongside green?</p> <p><i>Speakers</i> Mark Burrows, managing director and vice-chairman, global investment banking and capital markets, Credit Suisse Michael Eckhart, managing director and head of environmental finance, power, Citigroup Naoko Ishii, chief executive officer and chairperson, Global Environment Facility Jonathan Taylor, vice-president, European Investment Bank</p> <p><i>Moderator</i> Andrew Palmer, business affairs editor, The Economist</p>
<p>12.40pm</p>	<p>Launch of the United Nations Marine Litter Campaign</p> <p><i>Speaker</i> Erik Solheim, executive director, United Nations Environment Programme</p> <p><i>Moderator</i> Miranda Johnson, environment correspondent, The Economist</p>
<p>12.50pm</p>	<p>Briefing on strategy sessions</p>

	Charles Goddard, executive director, World Ocean Summit
12.55pm	Networking lunch
2.00pm	<p>Concurrent strategy sessions</p> <p>Day 1 breakouts explore new investment approaches to the sustainable ocean economy, as well as risk and financing challenges around two of the ocean's most vexing problems, plastics and fisheries. Outcomes to be presented at the plenum.</p>
	<p>1. Emerging investment and risk frameworks for the ocean</p> <p>Picking up from the plenary discussion, the aim is to further understand and scope the emerging investment and risk landscape for the sustainable ocean economy, and the guidelines and risk evaluation processes that such investment might follow. Innovation in financing and unlocking new sources of capital are key priorities.</p> <p><i>Presenters</i> Rob Weary, senior director, product development, NatureVest Brad Ack, senior vice-president, oceans, WWF</p> <p><i>One on one interview</i> John Tobin-de la Puente, professor of practice in corporate sustainability, Cornell University</p> <p><i>Respondents to presentation</i> David Barley, investment director, Althelia Ecosphere Fabian Huwyler, director, conservation finance, Credit Suisse Torsten Thiele, founder and managing partner, Global Ocean Trust</p> <p><i>Moderator</i> Andrew Palmer, business affairs editor, The Economist</p>
	<p>2. Plastics and solid waste: Local solutions to a global problem</p> <p>Tackling the global crisis of plastics in the ocean means reducing and better managing solid waste on land. Much of the estimated 8m tons of trash leaking into the seas each year comes from just a few countries—mostly in developing Asia. The idea that prioritising the solid waste problem in these countries could bring a rapid and sizeable overall reduction in plastics in the ocean is attractive. But like all sound ideas the devil is in the detail.</p> <p><i>One on one interview</i> Mohammad Ramdhan Pomanto, mayor of Makassar, Indonesia</p>

	<p><i>Presenters</i> Arif Havas Oegroseno, deputy minister of the coordinating ministry of maritime affairs and resources, Indonesia Piyush Bhargava, vice-president, global operations, Dell Ricardo Bayon, partner and co-founder, Encourage Capital</p> <p><i>Respondents to presentation</i> David Clark, vice-president, safety environment and sustainability, Amtor Andreas Merkl, chief executive officer, Ocean Conservancy Patrick Thomas, president, PlasticsEurope and board member, World Plastics Council David Jones, executive director for business and sustainability, Plastic Oceans Foundation</p> <p><i>One on one interview</i> Boyan Slat, founder and chief executive officer, The Ocean Cleanup</p> <p><i>Moderator</i> Miranda Johnson, environment correspondent, The Economist</p>
	<p>3. Financing sustainable fisheries</p> <p>Following on from Economist Events' South-east Asia and Pacific Fisheries Summit in Jakarta in July 2016, the session is designed to further scope and understand the landscape for investing in sustainable fisheries; explore new guidelines to help investors better navigate the risks; and map the conditions—in transition economies, especially—in which investments in fisheries are likely to be sustainable, rather than further depleting fish stocks.</p> <p><i>Presenters</i> Serge Mayaka, founder and managing principal, Impact Capitalyst Karin Kemper, senior director, environment and natural resources, global practice, World Bank</p> <p><i>Respondents to presentation</i> Chris Botsford, chief executive officer, ADM Capital George Kailis, professor of management, The University of Notre Dame Australia and executive chair, MG Kailis Group Fremantle David Carter, chief executive officer, Austral Fisheries John Keeler, chief executive officer and chief sustainability officer, Blue Star Foods Thomas Kraft, founder, Norpac Fisheries Export</p> <p><i>Moderator</i></p>

	Charles Goddard, executive director, World Ocean Summit
	<p>4. Scaling up investment in sustainable aquaculture</p> <p>Demand for seafood is rising inexorably. Reform of wild-capture fisheries will meet some of this growing need. But only by ramping up aquaculture will the larger demand be met—already farmed fish provides more than 50% of the seafood we eat. New, more sustainable aquaculture technologies suggest this is an enormous opportunity. But attracting capital remains a challenge.</p> <p><i>Presenter</i> Árni Mathiesen, assistant director-general, fisheries and aquaculture department, Food and Agriculture Organization Rachel Mutter, aquaculture editor, IntraFish</p> <p><i>Respondents to presentation</i> Alan Shaw, chief executive officer, Calysta Darian McBain, global director of sustainable development, Thai Union Blake Ratner, director-general, WorldFish</p> <p><i>Moderator</i> Dominic Ziegler, “Banyan” Asia columnist, The Economist</p>
4.10pm	Networking break
4.50pm	<p>Video message</p> <p>Narendra Modi, prime minister, India</p>
4.55pm	<p>The Ocean Innovation Challenge</p> <p>The Ocean Innovation Challenge, in co-operation with Blancpain, calls on innovators to share ideas on how to bridge the gap between sustainability and economic growth in the ocean. We seek innovations in financing, whether they are financial instruments, products or mechanisms, that will help channel responsible, sustainable investment into the ocean economy.</p> <p><i>Finalists</i> ‘The Seychelles blue bond project’ presented by Dominique Benzaken on behalf of the Government of the Seychelles ‘The Open Source Tuna Blockchain Tool’ presented by Nishan Degnarain from the National Ocean Council in Mauritius ‘The Wilderhill Ocean Index’ presented by Robert Wilder</p>

	<p><i>Judges</i> Jennifer Pryce, president and chief executive officer, Calvert Social Investment Foundation Sean Kidney, chief executive officer, Climate Bonds Initiative Andrew Palmer, business affairs editor, The Economist</p>
5.45pm	<p>The Ocean Conference and SDG14</p> <p>Peter Thomson, president, United Nations General Assembly</p> <p>Interviewed by Zanny Minton Beddoes, editor-in-chief, The Economist</p>
6.05pm	<p>Networking cocktail</p>
7.00pm	<p>An ocean conversation: making conscious consumption an everyday act</p> <p>Adrian Grenier, filmmaker, entrepreneur and social good advocate</p> <p><i>Moderator</i> Zanny Minton Beddoes, editor-in-chief, The Economist</p>
7.20pm	<p>Ocean Innovation Challenge: And the winner is...</p> <p><i>Presentation of prize</i> Alain Delamuraz, vice-president, Blancpain</p> <p><i>Moderator</i> Rupert Pennant-Rea, chairman, The Economist Group</p>
7.30pm	<p>The next generation #1</p> <p>A visual conversation with three young National Geographic explorers about their work to conserve the ocean.</p> <p><i>Brief opening remark</i> Glynnis Breen, vice-president, marketing and engagement for impact programmes, National Geographic Society</p> <p><i>Explorers</i> Asha de Vos, emerging explorer, National Geographic Society Erina Pauline Molina, young explorer, National Geographic Society Jessica Cramp, emerging explorer, National Geographic Society</p>

	<i>Moderator</i> Miranda Johnson, environment correspondent, The Economist
8.00pm	Dinner

DAY 2: CLIMATE CHANGE AND THE OCEAN	
8.00am	Registration
8.15am	<p>The discussion so far; the day ahead</p> <p>Zanny Minton Beddoes, editor-in-chief, The Economist</p>
8:30am	<p>Climate change and the ocean—what the science says</p> <p>Our understanding of climate change-related impacts on the ocean are worryingly sketchy, and the science comparatively new. But big strides are being made quickly.</p> <p><i>Presenter</i> Ove Hoegh-Guldberg, director, The Global Change Institute, University of Queensland</p>
8.40am	<p>Announcement of the 50 Reefs initiative</p> <p><i>Presenter</i> Ove Hoegh-Guldberg, director, The Global Change Institute, University of Queensland</p>
8.45am	<p>COP this—the ocean and climate-change policy #1</p> <p><i>Speakers</i> Ana Paula Vitorino, minister of sea, Portugal Laura Tuck, vice-president for sustainable development, World Bank</p> <p><i>Moderator</i> Charles Goddard, executive director, World Ocean Summit</p>
9.10am	<p>COP this—the ocean and climate-change policy #2</p> <p>Bringing the ocean into formal climate-change agreements has taken on a new urgency as the science begins to unravel the worrying consequences of climate change-related impacts on the seas—and as evidence of accelerating climate-change impacts on the ocean and coasts accumulates. Small steps have been taken at COP21 in Paris and COP22 in Marrakesh. But swifter and more ambitious action is needed. The challenge is how—the more so should a chillier global policy environment take hold.</p> <p><i>Opening interview</i></p>

	<p>Maria Damanaki, global managing director, oceans, The Nature Conservancy</p> <p><i>Speakers</i> Waldemar Coutts, ambassador, Ministry of Foreign Affairs, Chile David Schumacher, director, Washington State Office of Financial Management</p> <p><i>Moderator</i> Zanny Minton Beddoes, editor-in-chief, The Economist</p>
<p>9.35am</p>	<p>Assessing climate-change risk in the ocean</p> <p>The ocean is scarcely part of formal climate-change agreements so it should perhaps be no surprise that assessment of climate change-related risk to ocean investments is in its infancy. The G20-mandated Financial Stability Board taskforce on disclosing climate change-related risk, a largely terrestrial affair, has touched on aspects of coastal investments. Insurers worried about sea-level rise have been more focused. But a comprehensive evaluation—which could have a strong bearing on the viability and sustainability of future investments in the ocean—is a glaring omission.</p> <p><i>Speakers</i> Christopher Knowles, head of the climate change and environment division, European Investment Bank Paul Jardine, executive vice-president and chief experience officer, XL Catlin Namita Vikas, group president and managing director, climate strategy and responsible banking, YES BANK</p> <p><i>Moderator</i> Charles Goddard, executive director, World Ocean Summit</p>
<p>10.15am</p>	<p>The next generation #2</p> <p>Sisters Melati and Isabel Wijssen share an update on their campaign to rid Bali of plastic bags. Daniela Fernandez discusses the role of the millennial generation in protecting the ocean as impact investors, consumers and employees; in addition to sharing outcomes from the Georgetown University ocean youth leaders conference, which she helped convene alongside the US State Department's Our Ocean.</p> <p><i>Speakers</i> Melati and Isabel Wijssen, founders, Bye Bye Plastic Bags Daniela Fernandez, founder and chairperson, Sustainable Oceans</p>

	<p>Alliance</p> <p><i>Moderator</i> Dominic Ziegler, "Banyan" Asia columnist, The Economist</p>
10.35am	Networking break
11.10am	<p>Announcement of Global Mangrove Alliance</p> <p><i>Speakers</i> Greg Stone, executive vice-president, Conservation International Maria Damanaki, global managing director, oceans, The Nature Conservancy Brad Ack, senior vice-president, oceans, WWF</p> <p><i>Moderator</i> Charles Goddard, executive director, World Ocean Summit</p>
11.20am	<p>Sizzle session: The tech revolution</p> <p>We invite leading tech companies to demonstrate how their innovations are shaping the ocean economy while protecting its resources.</p> <p><i>Speakers</i> Brian Sullivan, program manager, Google Ocean & Earth Outreach Roger Hine, co-founder and chief technology officer, Liquid Robotics</p> <p><i>Moderator</i> Andrew Palmer, business affairs editor, The Economist</p>
11.45am	<p>Climate change case study: decarbonising shipping</p> <p>The International Maritime Organisation (IMO), the UN body regulating shipping, adopted its own roadmap in October 2016 for reductions in CO₂ emissions from shipping. The roadmap called for mandatory monitoring of fuel use up to 2023, after which decisions will be taken on the best way forward to further reduce emissions. Criticised as yet another delay to setting firm targets, there nevertheless are significant differences within the industry as to how to best achieve reductions. At the risk of being compelled by other regulators to move more quickly, what options do those representing the industry have, and should shipping be permitted to fall behind in its climate-change responsibilities?</p> <p><i>An Economist Events Roundtable in November 2016 explored the state of current efforts to reduce CO₂ emissions in shipping, and the</i></p>

	<p><i>technologies and financing required for the transition.</i></p> <p><i>Speakers</i> Esben Poulsson, chairman, International Chamber of Shipping Kitack Lim, secretary-general, International Maritime Organization</p> <p><i>Moderator</i> Daniel Franklin, executive editor, The Economist</p>
12.15pm	<p>Briefing on strategy sessions</p> <p>Charles Goddard, executive director, World Ocean Summit</p>
12.20pm	Networking lunch
2.00pm	<p>Day 2 strategy sessions explore aspects of climate-change related risk and investment in the ocean. Outcomes to be presented at the plenum.</p> <p>A more detailed programme for each strategy session will be made available at the Summit.</p>
	<p>5. Risky business: Climate-change risk and financing</p> <p>As part of the G20 process of strengthening the international financial architecture, the Task Force on Climate-related Financial Disclosures published in December 2016 draft recommendations on voluntarily disclosure of companies' exposure to climate change-related risks. Though it does not deal with marine investments specifically, the document offers a way to conceptualise and capture climate change-related risks to investments in the ocean and on coasts. Here we ask how this process might take shape, and how the recommendations might better reflect this need.</p> <p><i>Discussants and speakers</i> Sean Kidney, chief executive officer, Climate Bonds Initiative Christopher Costello, professor of resource economics, University of California Santa Barbara</p> <p><i>Moderator</i> Charles Goddard, executive director, World Ocean Summit</p>
	<p>6. Slow ahead: Financing the transition to sustainable shipping</p> <p>At the recent COP22 in Marrakesh, the Danish Shipowners' Association—breaking ranks with its peers—proposed an ambitious plan to reduce CO₂ emissions from shipping by some 50% from</p>

	<p>present levels by 2050. Setting clear reduction targets, the association says, is the only way to ensure shipping contributes its fair share to meeting the Paris Agreement goal of staying below a 2°C temperature rise. Working backwards from 2050, this session will build a roadmap for decarbonising shipping based on the Danish proposal, bearing in mind the unique political, technology and financing challenges facing the industry.</p> <p><i>Discussants and speakers</i> Andreas Povlsen, president and chief executive officer, Breakwater Capital and founder, Celsius Shipping Angie Farrag-Thibault, director, transport and logistics and collaborative initiatives, Business for Social Responsibility Peter Hinchliffe, secretary-general, International Chamber of Shipping Tristan Smith, reader in energy and transport, University College London</p> <p><i>Moderator</i> Dominic Ziegler, Banyan columnist, The Economist</p>
	<p>7. Stand or retreat? Responding to sea-level rise</p> <p>Climate change-related sea-level rise will prompt one of the largest infrastructure building programmes in history. Yet the risks of sea-level rise are broadly under-appreciated, as is the scale of the building task ahead—and the financing required. Protecting people, cities and coastal infrastructure from the sea is not new. Doing so successfully at this scale, and sustaining human settlements and assets as well as the coastal ecosystems on which we depend, will in part be determined by the role that finance and insurance plays.</p> <p><i>Speakers</i> Harald Lauke, president, advanced materials and systems research, BASF Avshalom Felber, president and chief executive officer, IDE Technologies Carol Anne Clayson, director, ocean and climate change institute, Woods Hole Oceanographic Institution</p> <p><i>Moderator</i> Miranda Johnson, environment editor, The Economist</p>
	<p>8. Business so blue: Pushing renewable energy in the sea</p> <p>Marine wind power is the flagship of renewables in the ocean, and has reached a scale where mainstream financing is taking notice. But there remain many challenges. New technologies such as</p>

	<p>floating wind energy, for example, and other less proven renewable energy technologies such as tidal barrages find financing difficult. The role of maritime clusters, many of which have a focus on renewables, may well help move the needle.</p> <p><i>Discussants and speakers</i> Andrew Dagley, head of Asia-Pacific, Atlantis Resources Riccardo Amoroso, chief innovation and sustainability officer, Enel Green Power Kiyohiko Ko, managing director, Future Energy Consulting João Metelo, chief executive officer, Principle Power</p> <p><i>Moderator</i> Andrew Palmer, business editor, The Economist</p>
3.30pm	Networking break
4.00pm	<p>The world if...?</p> <p>In the lead-up to the summit, we asked participants to submit their most hoped-for—or feared—scenario for the ocean economy. This session compiles and presents these scenarios, submitted via social media using the hashtag #oceanworldif, and asks leading thinkers to imagine the world if three of these scenarios became a reality.</p> <p>Peter Wong, president, Asia-Pacific, The Dow Chemical Company Justin Mundy, director, International Sustainability Unit Pascal Lamy, former director-general, World Trade Organization</p> <p><i>Moderator</i> Daniel Franklin, executive editor, The Economist</p>
4.40pm	<p>What comes next: a call for commitments</p> <p><i>Opening interview</i> Karmenu Vella, commissioner for environment, maritime affairs and fisheries, European Commission</p> <p>Susi Pudjiastuti, minister of maritime affairs and fisheries, Indonesia Olof Skoog, permanent representative of Sweden to the United Nations, Sweden</p> <p><i>Moderator</i> Zanny Minton Beddoes, editor-in-chief, The Economist</p>
5.25pm	Video: Ocean Can Rebuild Itself by National Geographic Society

5.30pm	Closing remarks Zanny Minton Beddoes, editor-in-chief, <i>The Economist</i>