

## The Ocean Solution

### Thursday 26 January

*This session was conducted under the Chatham House Rule.*

With the health of mankind closely linked to the health of oceans, how can growth and development be reconciled with conservation?

Dimensions to be addressed:

- Measuring and benchmarking ocean health
- Linking ocean conservation and development
- Promoting sustainable business practices

### Key Points

- The ocean is Earth's most valuable asset, yet 95% of this "natural capital" is unexplored.
- About 1.5 billion people count on fish for their daily protein source. As fisheries are at full production, what will happen when world population reaches 9 billion by 2050?
- Aquaculture is the way forward.
- As a rich global resource, oceans suffer from the "tragedy of the commons" – can the Earth's single largest ecosystem be sustainably managed?

### Synopsis

The oceans form Earth's largest single ecosystem, covering 361 million square kilometres. It is Earth's most valuable asset, yet 95% of it is unexplored. All of it is under threat. Fisheries are at full production, many species are endangered, there are vast dead zones, coral reefs are dying, huge masses of garbage are littered across the ocean floor, climate change poses a serious threat and pollution is pervasive. If the status quo prevails, the prognosis is grim: starvation, the lack of intact coastal systems, drowning cities and small island states, and political instability. In short, an environmental catastrophe.

The economic value of the oceans' "natural capital" is huge. Oceans contribute US\$ 70 trillion to global GDP annually. The value of unreported ecosystem services oceans provide is US\$ 38 trillion annually. Oceans support 90% of global trade volume and 40% of global trade value. More than 3.2 billion people live within 100 km of shore. Nearly 45 million people are employed in the fisheries sector worldwide, including aquaculture workers.

Oceans are at the centre of human well-being – 80% of our oxygen comes from oceans. Oceans are essential for carbon storage, but the capacity is limited. A key evolutionary step for humankind was early access to Omega-3 fish oil, which is vital for neonatal brain development.

Oceans provide the natural capital that drives all economies and all humanity, yet this resource has not been on the global radar screen. One of the greatest challenges of the 21st century will be the battle for natural resources. With 9 billion people by 2050, 3 billion of them in the middle class (10 times more than today's level of 500 million), humankind needs to double the production of food, water and energy without further depleting Earth's natural capital.

Today, more than 1.5 billion people count on fish for their daily protein source. However, many fish

stocks are overfished and many popular fish, such as bluefin tuna and orange roughy, are on the endangered species list. It is no longer feasible to feed people by harvesting wildlife, and catering to “luxury tastes” is unsustainable. Consider that a 269-kg bluefin tuna sold for approximately US\$ 746,000 at the opening tuna auction in Tokyo earlier this month. Restaurants and consumers play a major role in fisheries. Many restaurant chains are focusing on sustainability and insist on ethical sourcing. Consumers may not necessarily be willing to pay more for sustainable products, but they can be convinced to reject unethical ones.

Feeding a burgeoning population will require being more efficient and searching for protein and Omega-3 lower in the food chain. Solutions include harvesting or farming fish that mature in one year and that eat plants. Plankton is a good example, and it can be farmed on land using very few resources.

Aquaculture is the way forward. This is an area where environmental and commercial interests intersect. A major restaurant chain in the United States is actively supporting aquaculture. Today in North America, 90% of the shrimp consumed is farmed. It is time to scale up.

The International Maritime Organization (IMO) improves maritime safety and prevents pollution from ships. Its work in creating a regulatory framework is recognized and could be a model for coastal zone and ocean management. However, panellists agreed that a networked system of good governance is required that draws in all stakeholders, rather than laws and regulations. Most ruled out market mechanisms because the oceans’ systems are too complex and varied. But the IMO is “seriously dealing” with carbon and is considering establishing market-based measures for reducing carbon emissions from shipping.

The oceans are rapidly climbing up the political agenda. But more information is needed. Until now, there has been no consensus on what determines ocean health and no common metric to measure it. Next month Conservation International will launch the Ocean Health Index to measure the intensity of the most urgent ocean stressors, including climate change, acidification, overfishing, habitat degradation, invasive species, the loss of biodiversity, pollution and eutrophication. The index will also assess trends in the conservation of marine habitats and will relate trends in ocean health to benefits provided to people and human well-being.

### Disclosures

This summary was written by Dianna Rienstra. The views expressed are those of certain participants in the discussion and do not necessarily reflect the views of all participants or of the World Economic Forum.

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## The Ocean Solution

<http://www.weforum.org/sessions/summary/ocean-solution>

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