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Ocean: avoiding catastrophe

After years of mismanagement, the ocean is in a perilous state. But new tools, regulations and approaches – such as marine spatial planning – could make the ‘sustainable blue economy’ a reality

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Occupying over two thirds of our planet, and plunging to depths of over 11 kilometres, the sheer scale and intrinsic value of our ocean is difficult to comprehend. The ocean regulates our climate, provides half of the oxygen we breathe and feeds well over a billion people. Its economic value has been conservatively estimated at \$24 trillion, providing annual benefits of at least \$2.5 trillion to our global economy, according to WWF research.

Ranked with national economies, it would be the world's seventh biggest. For coastal communities in least developed countries and small island developing states (SIDS), the ocean is the mainstay of the economy and human wellbeing. There, it underpins the livelihoods and food supply of millions of people, many of whom have little opportunity for alternative sources of income or protein.

But we are now seeing a system in extreme stress, with many indicators of ocean health trending in the wrong direction. The question is: do we have the

knowledge, tools and political will to reap the substantial benefits the ocean offers, while achieving diverse, productive and resilient marine ecosystems?

As we exhaust our land-based resources, we are looking to the ocean for economic growth. According to OECD projections, by 2030 the ocean economy (including all economic sectors that have a direct or indirect link to the ocean) could outperform the growth of the global economy as a whole, both in terms of added value and employment. Coastal tourism alone is one of the fastest-growing industries, providing

◀ **A dead whale washed ashore in Rio de Janeiro, Brazil. Human activity is undermining the ocean's ability to support life in countless ways**

estimated economic benefits of more than \$9 billion to coral reef nations. In many ways, the ocean is seen as the last frontier for new business opportunities, with technology opening up access to remoter environments. Over the next 12 years we are likely to see unprecedented development in maritime infrastructure, energy, biotechnology, transport and food production.

While the ocean is critical to our very existence, it has been largely out of sight and out of mind. For many years, people have viewed it as an endless source of fish and an infinite sink for pollutants such as plastics and agricultural pesticides, nitrates and phosphates. But overuse and poor management are now taking their toll. There is increasing evidence that degradation of the ocean's natural capital is rapidly eroding the resource base on which economic growth expectations depend.

A number of threats

The impacts from unsustainable fishing, poor coastal development, increased shipping and so on are manifold – but one of the most pervasive threats to our ocean today is climate change. Increasing ocean temperatures in particular have played out in the most dramatic way over the last few years. We have seen increasingly violent storms across the Caribbean and Pacific Island regions, and the loss of large tracts of the Great Barrier Reef in Australia, one of the most iconic natural wonders of our world.

Over the last 30 years, we have lost around half of our coral reefs globally due to a range of pressures. And on the current trajectory, we may lose nearly all of our reefs from most sites in the next 30 years. This loss is not only bad news for marine species – it's bad news for all of us. While coral reefs may only occupy a tiny proportion of the ocean floor, they are home to a quarter of all marine fish species. I have seen how these fisheries power the local economies of many tropical coastal communities, offering a way out of poverty

by supporting six million jobs (according to research by Teh, Teh and Sumaila).¹ Reefs also provide an essential food supply, as well as products for global markets. Over 60 million people depend directly on coral reefs for physical protection from storm surges. Without this, governments could face the heavy costs associated with maintaining artificial coastal protection.

The situation is perverse, especially when we consider that overfishing alone is estimated by the World Bank to be costing fisheries \$83 billion a year in lost revenue. The global marine harvest could be 13 per cent higher if fisheries were managed more sustainably. Put simply, the current level of unsustainable economic activity in the ocean, and the projected growth of this activity, will likely increase social and economic risks and costs – not least in terms of people's livelihoods and food security. It's a lose-lose scenario for all.

Getting the political traction and investment to implement each of the targets is challenging

This, of course, runs counter to the ambitions of the Sustainable Development Goals (SDGs). Yet, if we start to value and restore our ocean's natural capital, significant opportunities could be realised.

The SDGs – in particular the ocean goal (SDG 14) – offer a clear framework and a significant opportunity to address some of the biggest threats facing our ocean today. Getting the political traction and investment needed to implement each of the targets is challenging.

But at the SDG 14 meeting in New York in June 2017, there was real optimism for a sustainable economic growth agenda, with the SIDS acting as strong vanguards. Government and business leaders also made impressive commitments to ocean protection and sustainability at the 'Our Ocean' conference in Malta last October, motivated in part by the spotlight that ocean plastics have put on the state of our ocean's health.

But before looking forwards to economic growth, we first must consider how to restore our ocean ecosystems. Emerging governance tools, regulations and approaches, if established and implemented effectively, could build ocean resilience and improve long-term investment opportunities. Marine protected areas (MPAs), for example, aim to protect fragile and representative habitats and species so that marine life is able to breed and mature. This allows the system to recover and become more resilient to human pressures.

Not only have MPAs been shown to increase fish biomass, they make economic sense if effectively managed, potentially creating billions of dollars of benefits, according to WWF-commissioned research. Yet despite a global agreement to protect 10 per cent of the ocean by 2020, only about seven per cent is currently under some form of protection. Significantly less is under effective management.

Restricting the exploitation of areas spatially can be challenging. However, many communities in the developing world are already embracing strong co-management, supported by tools such as fishing-free areas as part of an overall coastal management plan. Tanzania's beach management units, for example, have led to sharp declines in blast fishing and improved octopus catches. Locally managed marine areas across the Pacific islands have also shown improved community benefits. There are certainly many lessons we can learn from these regions even though they face resource and capacity constraints.

At larger scales, marine spatial planning (MSP) is an emerging ocean governance tool fundamental to the delivery of the growth ambitions of many coastal states. It looks holistically across seascapes and takes into consideration competing interests and the cumulative impact of all the activities taking place in that area. In doing so, it aims to reduce potential conflict and ensure that there is space for nature. This means the ecosystem's resilience is not compromised and the replenishment of natural resources is supported. MSP is already underway at scale in several countries, including the UK. It requires multi-sector collaboration and concerted action in ways that haven't been

attempted before. But that's what is required if our ambitions for sustainable development in our ocean are to be delivered.

During the last few years, the term 'sustainable blue economy' has come into common policy parlance. In short, it means the use of the sea and its resources for sustainable economic development without compromising the integrity and health of the ocean. As the primary user of the blue economy, the private sector is critical to turning this vision into reality.

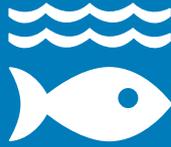
Maritime business leaders are increasingly aware of the long-term risks of continuing with business as usual. In an environment that already carries significant business risk – as a result of the complexity and inconsistency of the regulatory environment, information challenges, and the cumulative nature of impacts – there is limited available guidance on how to act. WWF's principles for a sustainable blue economy aim to provide a framework for the private sector. However, there is an urgent need for industry-specific targets, measures and guidelines, for better-integrated regulation and stronger incentives.

The finance and investment sector will need to play a pivotal role in driving this transition. With this in mind, WWF, the Prince of Wales's International Sustainability Unit, the European Commission and the European Investment Bank are developing a new set of voluntary finance principles specific to the sustainable blue economy. These will act as a framework for sustainable mainstream investment and development policy decisions, underpinning the delivery of the SDGs.

Changing tide

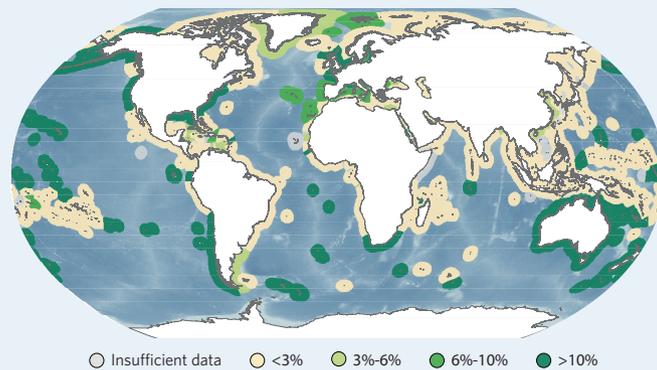
Given the perilous state of our ocean today, it's understandable to feel a sense of hopelessness. We should certainly be deeply concerned and motivated to act. But in recent years, I have also seen a changing tide in the way that our ocean is perceived by those who have a stake in its future. The international community has reaffirmed its strong commitment to conserve and sustainably use the oceans through SDG 14. Maritime businesses are starting to recognise the risks and costs associated with business as usual.

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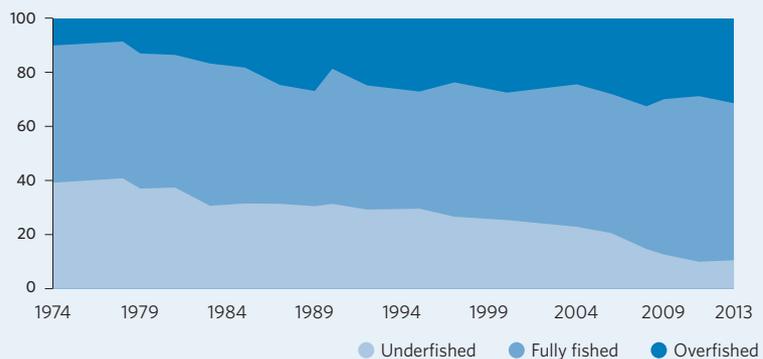


Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Proportion of marine areas within national jurisdiction (0-200 nautical miles) covered by protected areas, 2017 (percentage)



Proportion of fish stocks within biologically sustainable and biologically unsustainable levels, 1974-2013 (percentage)



Source: The Sustainable Development Goals Report 2017, United Nations

Inspiring conservation and co-management efforts are happening in some of the least developed coastal communities. With the right kind of investment; a supporting, enabling environment; and technological innovations, there is a momentous opportunity now to create a sustainable blue economy future. It is a

future that can support all of our needs – in particular of those people fully dependent on the ocean for their wellbeing – long into the future. ●

1 Teh LSL, Teh LCL, Sumaila UR (2013). A Global Estimate of the Number of Coral Reef Fishers. *PLoS ONE* 8(6): e65397. doi:10.1371/journal.pone.006539