



WWF®

SUMMARY

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2015

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23 APRIL 2015, Time 00:01 CEST



REVIVING THE OCEAN ECONOMY

The case for action - 2015

in association
with



Front cover

A fisherman shows some of his catch in Mafamede, Mozambique, part of the Primeiras and Segundas Environmental Protection Area.

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The **Global Change Institute** (www.gci.uq.edu.au) is an Australian-based research institute that is focused on evidence-based solutions to global challenges such as food security, clean energy, sustainable water, and healthy oceans. Professor Hoegh-Guldberg also undertakes research on coral reef ecosystems and their response to rapid environmental change, which is supported primarily by the Australian Research Council (Canberra), National Oceanic and Atmospheric Administration (Washington, D.C.), Catlin Group (London), and Great Barrier Reef Foundation (Brisbane). He did not receive salary for writing this report.

The **Boston Consulting Group** (BCG) is a global management consulting firm and the world's leading advisor on business strategy. We partner with clients from the private, public, and not-for-profit sectors in all regions to identify their highest-value opportunities, address their most critical challenges, and transform their enterprises. Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results. Founded in 1963, BCG is a private company with 81 offices in 45 countries. For more information, please visit bcg.com

WWF is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

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A WWF International production

Printed by NCP SA, Switzerland

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ISBN 978-2-940529-20-9

The full report is available at: ocean.panda.org

Recommended citation: Hoegh-Guldberg, O. et al. 2015.
Reviving the Ocean Economy: the case for action - 2015.
WWF International, Gland, Switzerland., Geneva, 60 pp.

SUMMARY

Earth is distinguished from all other known planets by the presence of a warm, salty ocean that covers more than two-thirds of its surface. Its value to our planet is incalculable, but has been brought into sharp focus by the fact that the future of humanity is dependent on the health of the ocean, and the goods and services it provides.

Yet this invaluable resource that feeds us, stabilizes the climate and provides countless other benefits is showing serious signs of failing health. Ocean health is declining due to local stresses such as habitat destruction, overfishing and pollution, as well as global phenomena such as rapid and unprecedented changes in ocean temperature and acidity.

WWF's Reviving the Ocean Economy report clearly spells out what we all stand to lose if the mismanagement of ocean assets continues. Recognizing that science alone is an insufficient motivator, we have combined the evidence of serious environmental degradation with the economic case for urgent action.

Working with the eminent scientist Professor Ove Hoegh-Guldberg and in collaboration with leading business consultancy The Boston Consulting Group, WWF looked at the bottom-line implications leaders should consider based on current policies and practices. The results illustrate the economic case for ocean conservation in stark terms. The range of goods and services that flow from coastal and marine environments can be valued conservatively at US\$2.5 trillion each year, and the overall value of the ocean as an asset is 10 times that. We emphasize that this is an underestimate, as outputs that are not generated by the ocean – offshore oil and gas, and wind energy, for example – were excluded, as were valuable intangibles such as the ocean's role in climate regulation.



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The report brings together the latest assessments of some of the most valuable ocean assets, from fish stocks to corals, and shows how rapidly they are declining. To revive the ocean's productive capacity before it is too late, the world must take urgent action. The eight actions proposed are achievable and all are important; however, we recommend that the first three be prioritized for action in 2015.

- ACTION 1** Ensure ocean recovery features strongly in the UN Post-2015 Agenda, including the Sustainable Development Goals (SDGs). The Post-2015 Agenda will establish global ambition, outline practical policy steps and guide investment in sustainable development for the next 15 years or more. Goal 14 of the SDGs focuses specifically on the ocean, namely to “conserve and sustainably use the oceans, seas and marine resources for sustainable development.” Indicators under this goal must address issues such as habitat destruction, overfishing, illegal fishing and marine pollution, and solutions must be crafted in an equitable and participatory way. If all this is achieved, the scene will be set for unprecedented and concerted international action, which is crucial for steering our ocean toward a more sustainable future.
- ACTION 2** Address the problems of ocean warming and acidification. We must listen to science and make the deep cuts in emissions that will prevent further increases in dangerous climate change. It is vital that the world signs on to an ambitious international agreement in Paris in December 2015 (COP21) that will allow the rapid decarbonization of our economies and societies. Failure to solve the climate change problem will frustrate, and in many cases defeat, attempts to bring sustainable practices to the world's ocean.
- ACTION 3** Countries should deliver against the agreed target for at least 10 per cent of coastal and marine areas to be protected and effectively managed by 2020, with an increase to 30 per cent by 2030. This is not just about the extent of area protected; it is about establishing representative networks of marine protected areas that are most important for delivering outcomes for biodiversity, food security and livelihoods.
- ACTION 4** With 61.3 per cent of the world's fisheries now fully exploited, and 28.8 per cent over-exploited, depleted or recovering from depletion, there is an urgent need to revise policies to ensure that the over-exploitation and destruction of fisheries does not continue, and to deal with the problem of illegal fishing. Habitat protection and fisheries management must go hand in hand, with the goal being ecologically sustainable fisheries.
- ACTION 5** Given the transboundary nature of the ocean, we need appropriate international mechanisms for negotiation and collaboration to ensure its sustainable management. Formation of a “Blue Alliance” of concerned maritime countries will provide leadership and build the case for a rapid and comprehensive set of actions on behalf of the ocean.

Such a coalition could build international will and foster the shared global responsibility and informed decision-making that are important when it comes to ocean resources. It will also be important to establish a global fund to support countries that have fewer resources and are more vulnerable to the impacts of ocean degradation.

- ACTION 6** Appropriately structured public-private partnerships that take into account the well-being of communities, ecosystems and business have the potential to revolutionize how sectors work together sustainably. Enabling a network of such cross-sector partnerships to share ideas, solutions and blueprints for sustainable practices will ensure that even the poorest countries have access to necessary resources.
- ACTION 7** Communities and countries must develop complete, transparent and public accounting of the benefits, goods and services that the ocean provides. Valuing the ocean's assets is vitally important to effective decision-making.
- ACTION 8** Develop an international platform to support and share ocean knowledge and solutions through which problems can be understood, and solutions and methodologies evaluated and applied. Such a platform must be interdisciplinary and informed by biological, social and economic data. This platform will build capacity and improve access to critical information and expertise.

WWF has brought together the research and conclusions of an expert community and marries this scientific evidence with a common-sense economic case for action to safeguard the value of our ocean. The message is clear: We are running down our ocean assets and will push the ocean economy into the red if we do not respond to this crisis as an international community. A prudent treasurer or CEO would not wait until the next financial report to correct course. They would act now.

The eight actions outlined here can provide a sustainable future for the hundreds of millions of people who depend directly on the ocean for their food and jobs, and for all humanity, which depends on the ocean as an essential contributor to the health of our planet.



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OCEAN ASSET VALUES

FIGURE 1 - GLOBAL OCEAN ASSET VALUE

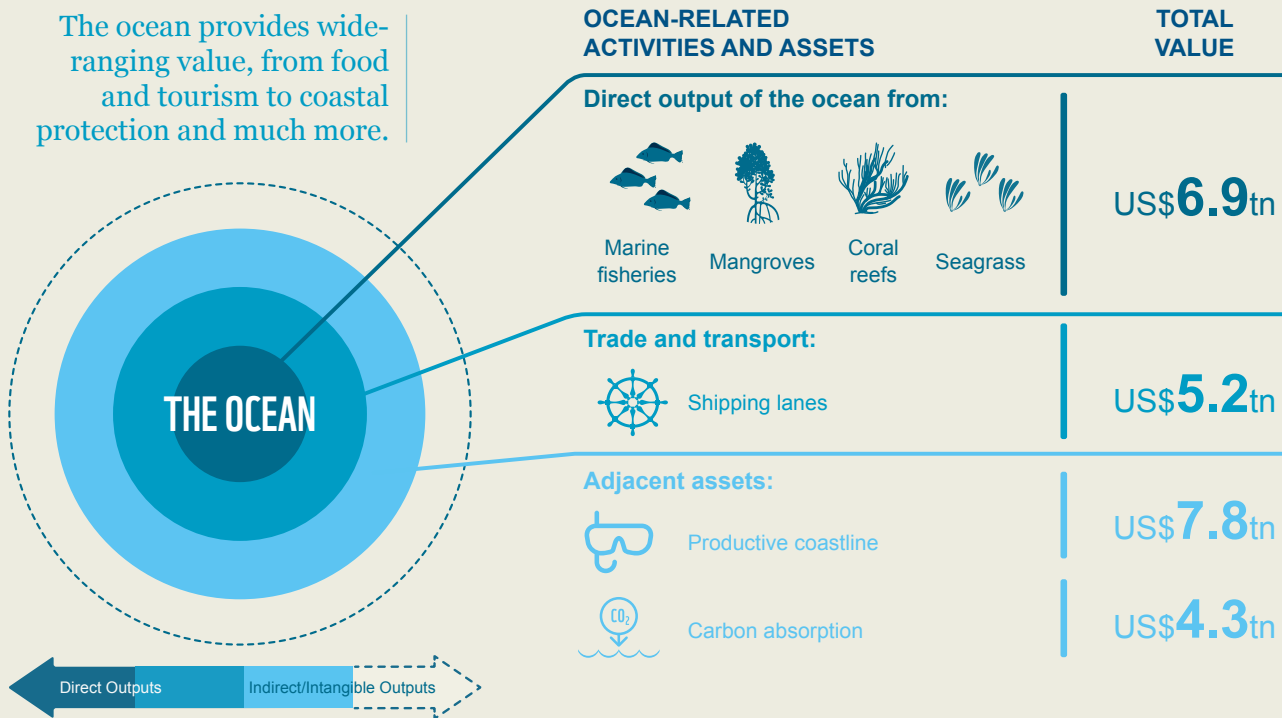
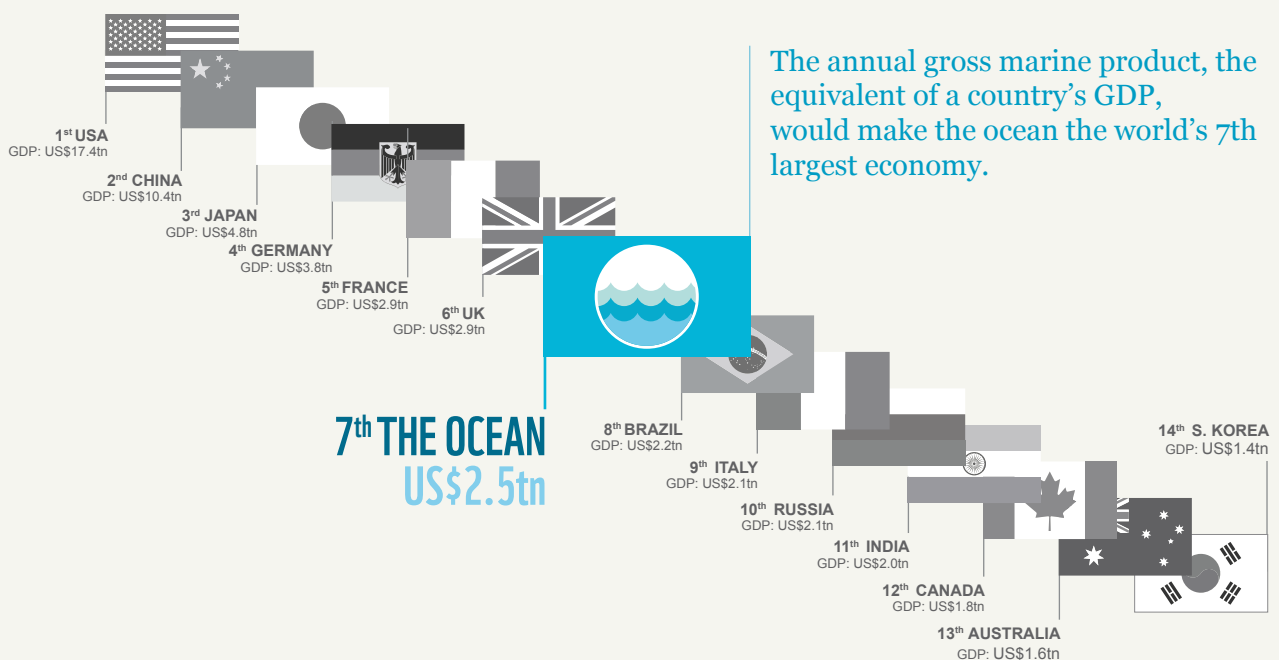
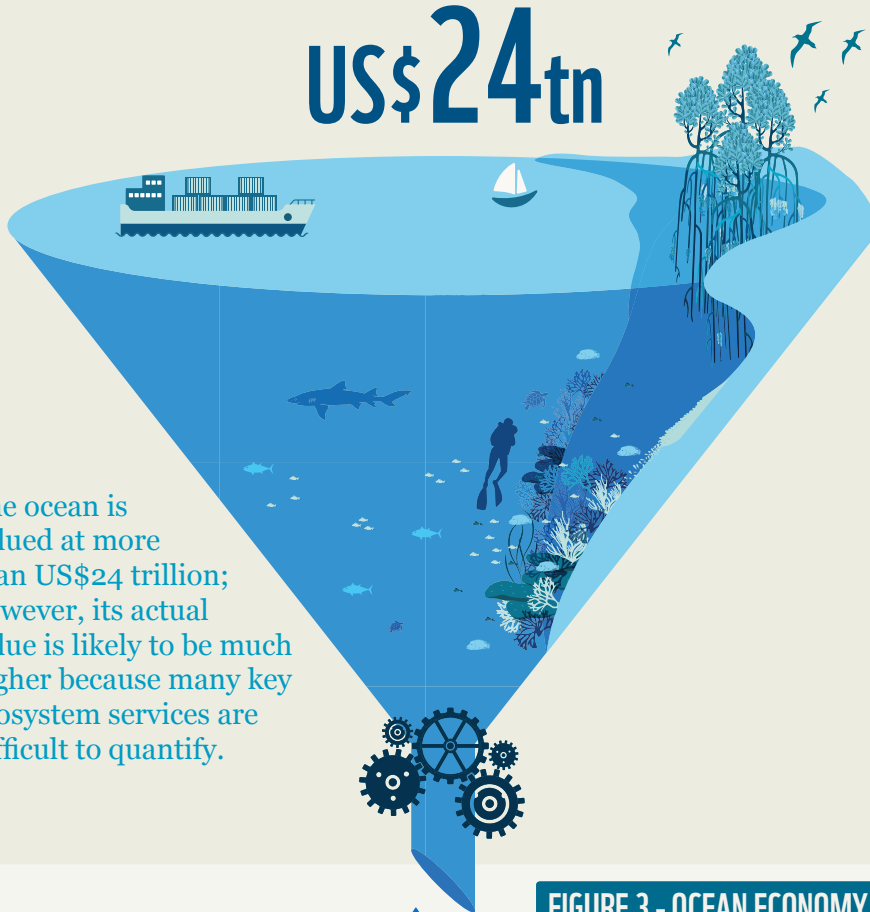


FIGURE 2 - ANNUAL GROSS MARINE PRODUCT



US\$24tn



The ocean is valued at more than US\$24 trillion; however, its actual value is likely to be much higher because many key ecosystem services are difficult to quantify.

The ocean's asset value would dwarf the world's largest sovereign wealth funds:

- US\$893bn**
NORWAY
Government Pension Fund
- US\$773bn**
ABU DHABI
ADIA
- US\$757bn**
SAUDI ARABIA
SAMA
- US\$653bn**
CHINA
China Investment Corp.

FIGURE 3 - OCEAN ECONOMY DEPENDENT ON HEALTHY ASSETS

Gross marine product is the ocean's annual economic value.

More than two-thirds of the gross marine product is dependent on healthy ocean assets.

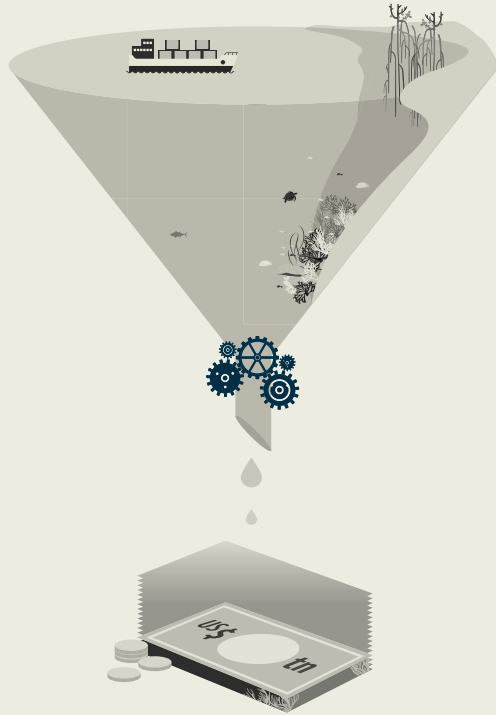
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For more information on the BCG methodology, please visit: ocean.panda.org

UNDERPERFORMING ASSETS: GLOBAL OCEAN ECONOMY IN DECLINE



DECLINE OF FISHERIES



90% OF GLOBAL FISH STOCKS ARE OVER-EXPLOITED OR FULLY EXPLOITED



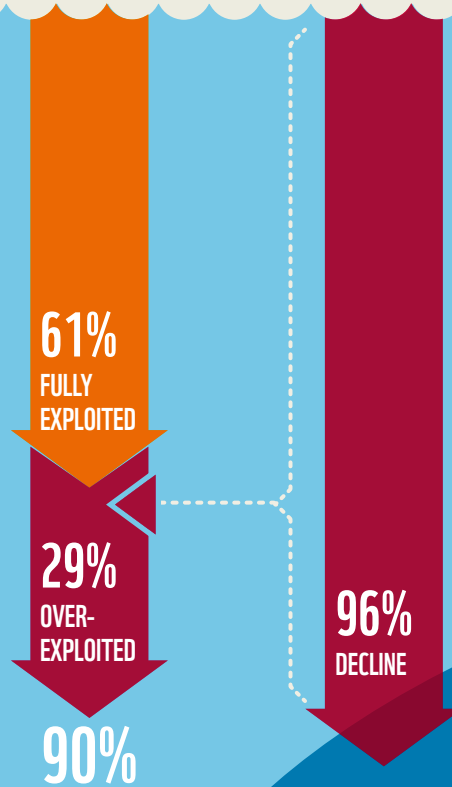
PACIFIC BLUEFIN TUNA NUMBERS HAVE DROPPED 96% FROM UNFISHED LEVELS

As natural assets are degraded, the ocean is losing its capacity to feed and provide livelihoods for hundreds of millions of people.

The downward trends are steep and reflect major changes in species abundance and diversity, as well as habitat extent, most over a single human lifespan.

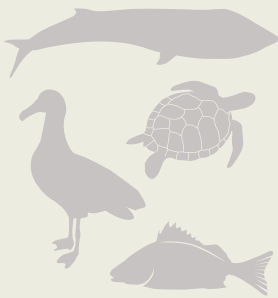
References:

FAO 2014, ISC 2012, WWF/ZSL 2014, Hoegh-Guldberg 1999, Hoegh-Guldberg et al. 2007, Waycott et al. 2009, UNEP 2014.



DECLINE OF HABITATS

DECLINE OF MARINE SPECIES

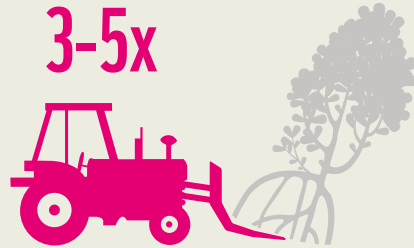


THE MARINE LIVING PLANET INDEX* SHOWS A DECLINE OF 39% BETWEEN 1970 AND 2010

*The marine Living Planet Index is an indicator of the state of global biological diversity, based on trends in more than 900 marine species of mammals, birds, reptiles and fish.

39%

DEFORESTATION RATE OF MANGROVES EXCEEDS EVEN THE LOSS OF FORESTS BY 3-5 TIMES



50% OF THE WORLD'S CORALS HAVE DISAPPEARED

50%



ALMOST ONE-THIRD OF ALL SEAGRASSES HAVE BEEN LOST

29%

2050

AT CURRENT RATES OF TEMPERATURE RISE, CORAL REEFS WILL DISAPPEAR BY 2050

The ocean in numbers



US\$24TN

The overall value of key ocean assets is more than US\$24 trillion

2/3

Two-thirds of the base economic value of the ocean is produced by assets that rely on healthy ocean conditions



2050

At current rates of temperature rise, coral reefs will disappear by 2050

7TH

Based on the gross marine product, the ocean is the 7th largest economy in the world



Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.
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SUSTAIN OUR SEAS