

OCEANS UNDER THREAT

The world's oceans provide half of the planet's oxygen, and ecosystem services estimated at 5-6% of global GDP. Fisheries in 2008 provided some 3 billion people—nearly half the world's population—with at least 15% of the protein in their diets. They also employed some 540 million people (8% of the world's population). In West Africa and the Pacific islands, fisheries are responsible for more than 30% of annual export earnings, and provide local livelihoods for hundreds of thousands of coastal families. In addition to providing \$100 billion in fish and aquatic plant sales income annually, marine and coastal resources provide some \$3 trillion in annual economic goods and services, plus an estimated \$21 trillion per year in non-market ecosystem services. Last but not least, oceans are the world's largest carbon sink, absorbing about 30% of global CO₂ emissions.

For many small island states, better coastline management is the development *sine qua non* of climate change adaptation. But for coastal communities all rich and poor countries alike, oceans are central to livelihoods, culture, traditions, and identities.

For these and other reasons, national transitions to sustainable development require robustly healthy, vibrant oceans. However, the world's oceans at present face a number of serious threats, including:

- Unsustainable fishery practices—the depletion of global fish populations results in at least [\\$50 billion in losses](#) annually;
- Coastal habitat loss and conversion, particularly in terms of mangroves, sea grasses, and coral reefs (which could disappear by 2050, if 'business as usual' continues);
- Stratification and acidification, due to climate change (oceans have become 30% more acidic since the start of the industrial revolution; by 2050, ocean acidity could increase by another 150%);
- Pollution, particularly by nutrients and plastics; and
- Invasive aquatic species, particularly those carried in ship ballast water and hulls, cause an estimated \$100 billion in damage each year to infrastructure, ecosystems and livelihoods.

The oceans' resources are central to the livelihoods of millions—particularly in developing countries. However:

- Unsustainable management of global fisheries is resulting in some \$50 billion in annual losses, for fish-dependent economies and communities.
- While occupying less than 1% of the marine environment, tropical coral reefs offer habitat to 25% of all known marine species. They also help to mitigate the impact of hurricanes, tsunamis, storm surges, and other water-based coastal disaster risks. Unfortunately, about one fifth of the world's coral reefs have already been damaged beyond repair. The existence of all coral reefs could be at risk by 2050, if 'business as usual' continues.
- Recent research indicates that the world's oceans have become 30% more acidic since the start of the industrial revolution. Should present trends continue, ocean acidity could increase by another 150% by 2050. Many delicate marine ecosystems could find themselves facing unprecedented adaptation challenges in the coming decades. Not all would meet these challenges.
- Whereas biodiversity in 11.5% of global land area is covered by protected area arrangements, less than 0.5% of marine habitats are so protected.

Most of these problems can be traced to market failure: the oceans are a common property resource, whose expanses can not be owned, and from which suppliers and consumers can not be easily excluded.

What is to be done?

Fortunately, these problems have solutions—in the form of better national and trans-national governance of ocean and water resources.

At issue is the willingness, and capacity, of public institutions to replace policies that permit the over-exploitation of the oceans' resources with policies that encourage the sustainable management of these resources. Progress in this respect is particularly important in three areas:

- Replacing subsidies that encourage the over-exploitation of the ocean's resources with policies promoting resource conservation and renewal;
- Stronger efforts to deepen the institutional capacity of the trans-national, national, and local bodies charged with designing and implementing these policies; and
- Raising awareness among all stakeholders—governments, private companies, civil society organizations, local communities, academia, and the general public—regarding the significance of the threats to the world's oceans, as well as of the responses.

Particularly important elements of this response include:

- Rapid progress in the design and implementation of low-emissions, climate-resilient national development strategies;
- Progress towards eliminating, or at least significantly reducing, market distortions such as fisheries subsidies, while simultaneously scaling up the use of such proven economic instruments such as pollution taxes, tradable pollution permits, individual transferable fishing quotas, and payments for ecosystem services;
- New ocean initiatives, to promote ocean reform and improve the enabling environments for attracting public- and private-sector investment (including via ['blue carbon'](#));
- Increased political will and commitment by all stakeholders—governments, private companies, international organizations, civil society, academia—to seriously address these issues.

What will happen at 'Rio+20'?

Member states and other participants at 'Rio+20'—which coincides with the 30th anniversary of the adoption of the [UN Convention on the Law of the Sea](#)—will have the opportunity to better:

- Understand the causes and implications of these threats to the oceans—in terms of their social, as well as ecological and economic dimensions, and particularly for small island developing countries; and
- Recognize the importance of local, national, regional, and global governance reforms to both improve the management of ocean resources and catalyze the public- and private-sector finance needed to address these threats.

As a result, they will be able to participate in, and contribute to, a number of critical ongoing and new ocean initiatives, including:

- The [Blueprint for Ocean and Coastal Sustainability](#);
- [Blue carbon](#);
- The Global Environment Facility's [International Waters Programme](#);
- The World Bank's [Global Partnership for Oceans](#);
- The [Global Partnership on Nutrient Management](#);

UNDP's Water and Ocean Governance Programme

Through its UNDP/GEF International Waters portfolio, UNDP has supported:

- The world's first two large marine ecosystem commissions, both of which are in Africa;
- Integrated coastal management programming that now covers some 11% of East Asia's coastline (with a 20% target for 2015);
- The adoption of the Sustainable Development Strategy for the Seas of East Asia; and
- [The GloBallast Programme](#), which is helping public- and private-sector stakeholders to develop the institutional capacity they need to comply with the coming into force of the [Global Convention on Ship Ballast Water and Sediments](#).

These programmes have catalyzed sizeable levels of both public and private sector finance.

- In the Danube/Black Sea basin, the Yellow Sea, and other East Asian seas, billions of dollars have been mobilized to reduce pollution, overfishing, and habitat loss, while promoting sustainable aquaculture.
- Billions of dollars in financing have been attracted under these programmes for investment in research and development of new ballast water treatment technologies.

In so doing, international and national waters programming supported by UNDP has demonstrated the transformational power of ocean governance reform to address the threats facing the world's oceans. It has shown that millions of dollars in official development assistance can be leveraged into billions of dollars of public- and private-sector funding that empowers coastal communities, while saving livelihoods and improving environmental conditions.

- The [Honolulu Commitment and Strategy](#) on Marine Litter; and
- The UN [Green Economy in a Blue World](#) initiative.

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