



## Helping to Better Manage the World's Oceans

### The World Bank and the Drive for 'Blue Growth'

#### SYNOPSIS

A healthy ocean is a valuable natural asset that, if maintained and nurtured, can provide 'ecosystem services' that contribute to economic expansion – or 'blue growth' – in developing coastal and island countries. World Bank investments in the oceans between 2007 and 2011 have supported developing coastal and island countries in improving the health of their ocean environments, enhancing the value of the ecosystem services they provide to the local and global economy. In particular, these investments supported countries to manage the transition to more sustainable fisheries, establish coastal and marine protected areas, and implement integrated coastal and marine ecosystem management. In the years going forward, the Bank aims to significantly scale up investments in the development and implementation of new laws and institutions for the use of ocean ecosystem services in countries' waters, through leadership in a Global Partnership for Oceans.

#### Challenge

The oceans are presently contributing far less to global economic growth than they could be, largely as a result of human actions changing the ability of the underlying natural systems to provide ecosystem services. The environmental status of the oceans is changing at a rate and scale not seen since the rise of modern civilization, largely due to failures in the governance of human actions. The four key results of these failures that are driving ocean decline are as follows:

➤ **Overfishing:** Technological improvements coupled with open access to fish stocks have led to roughly one-third of the world's ocean fisheries being over-exploited or depleted. Fishing capacity is estimated to be 2.5 times greater than sustainable harvest levels. Through analysis by the Global Program for Fisheries (PROFISH), the World Bank and the Food and Agriculture Organization estimated in 2009 that

the lost potential economic benefits from marine fisheries are estimated to be on the order of US\$50 billion annually.

➤ **Pollution, particularly land-based nutrient pollution:** Nitrogen application has increased fivefold since 1960, but as much as 50 percent of the nitrogen fertilizer applied is lost to the environment, depending on how well the application is managed. Much of this excess runs off into rivers and streams and eventually to the ocean, resulting in algal blooms that consume most of the oxygen. This has adverse effects on marine life, leading to 'dead zones'. There are now an estimated 405 ocean dead zones around the world, covering 95,000 square miles – an area the size of New Zealand.

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- ↘ Habitat loss or conversion (e.g. coastal development, coastal deforestation, fishing with dynamite, and mining): Ocean areas are experiencing some of the most rapid environmental change on the planet. An estimated 35 percent of mangrove area in countries with data on this aspect was either lost or converted between 1985 and 2005; and at least 20 percent of coral reefs have been destroyed globally in the last several decades of the twentieth century, with another 20 percent being degraded.
- ↘ Climate change: Over the coming decades and centuries, ocean health will become increasingly stressed by rising seawater temperature, ocean acidification, and ocean de-oxygenation in ways that we are only beginning to understand. Coral bleaching, caused by rising ocean temperatures, is already affecting vast areas of tropical coral reefs, which harbor 25 percent of marine biodiversity.

## Approach

Although human actions are driving negative changes in the ability of the living ocean to contribute to global economic growth, they could also drive positive change to reverse this trend and rebuild the natural capital of the living ocean. Most of such actions occur in the context of the institutions that govern the way ocean ecosystem services are valued and used. For this reason, the World Bank has been working with partners to increasingly support public investment in the development of new laws and institutions needed to both enhance the value of ocean ecosystem services (i.e. develop the ocean's contribution to the 'green' economy) and to alter conditions of blurred ownership leading to the tragedy of the commons, drawing upon the analytical work of PROFISH. These laws and institutions aim to establish clear frameworks for the effective and efficient use of ocean ecosystem services that remove the open access characteristic of these resources generally

resulting from countries' inability to exercise the jurisdiction over their waters.

Based on the lessons learned so far, the approach is to scale up these investments to support the next generation of governance reforms; these include implementing rights-based fisheries management, supporting development of sustainable aquaculture, developing blue carbon assets, creating market mechanisms to internalize the costs of marine pollution, and supporting partnerships for sustainable financing of marine protected areas, among others. These governance reforms would lead to an enhanced quality of ocean environments, and support economic growth and livelihoods.

## Results

The World Bank's 'blue growth' portfolio is relatively new (compared to the traditional portfolio in ocean extraction/use which did not account for the underlying natural capital), but there is already growing evidence of its impact. Some of the results achieved with World Bank support, based on financing from the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA), or through trust funds managed by the World Bank, are as follows:

- ↘ **Establishing marine protected areas and integrated coastal management systems.** Since the 1990s, the Bank and Bank-managed trust funds (such as those from the Global Environment Facility) are supporting the establishment and operation of marine protected areas in a number of countries around the world, to protect critical habitats and biodiversity. For example, the Coral Reef Rehabilitation and Management Program in **Indonesia** (FY 1999) has supported a vast public information effort on the importance of coral reef ecosystems, training 1,225 teachers in marine education, and reaching 130,000 students (including over 600 university students working in coastal villages). In the second phase of this project (approved FY05), the Bank worked together with local government to support 358 villages in seven coastal districts to

improve the management of coral reef resources, and to protect the underlying reef ecosystems. This helped in legal formation of co-managed reef areas covering approximately one million hectares, and a 60 percent decrease over six years in the use of destructive fishing practices such as the use of dynamite for fishing. As these practices are reduced, and the reefs recover or are maintained under protection, they can supply greater levels of fish to surrounding fishing grounds, acting as ‘fish banks’.

➤ Similarly, the Coastal and Biodiversity Management Project in **Guinea-Bissau** (FY05) helped the country to establish a national parks and protected areas agency and network, protecting 480,000 hectares of the country’s coastal zone (representing over 13 percent of the national territory) together with local communities. In four of the five protected areas established, the effectiveness of park management increased by at least 15 percent from 2005 to 2010, based on an index of management indicators (e.g. sufficient budget, park management planning, consultation, etc.) in the World Bank/World Wildlife Fund protected areas tracking tool. To ensure that these protected areas are sustainably financed, partners and stakeholders have now established a private foundation, Fundação BioGuinea. A new Bank project, the Biodiversity Conservation Project (FY11), is supporting the operation and fund-raising efforts of this foundation until it is fully capitalized to be self-sustaining. These protected areas are considered national assets by the country and would form the backbone of a future tourism industry.

➤ **Supporting sustainable fisheries.** Since 2007, the Bank has been increasingly focused on supporting the development of the laws and institutions needed for sustainable fisheries. For example, the West Africa Regional Fisheries Program covers nine countries from Mauritania down to Ghana, beginning with Cape Verde, Liberia, Senegal, and Sierra Leone in early 2010. The objective of this Program is to sustainably increase the contribution of the marine fish resources to the region’s economy, through strengthened governance of the fisheries,

reduced illegal fishing and increased local value added to fish products. In Liberia, the government passed a comprehensive fisheries regulation in December 2010 as the first legal framework for fisheries management since the 1970s. It also inaugurated the first fisheries monitoring center with radio and satellite communication links to the fishing fleet in order to help reduce illegal fishing. Subsequently, the government conducted its first arrests on five illegal fishing vessels over the next several months, including the first at-sea arrest by the Liberian Coast Guard in July 2011. The first full registration of the country’s small-scale fishing fleet of 3,000 boats has been completed, and fishing licenses and revenues publicly disclosed for the first time. All of these efforts have begun to introduce a minimum level of rule of law in the fisheries, that will allow for the development of more secure fishing rights as incentives for greater private investment in the sector.

### IDA Results

Some of the key highlights of results achieved in IDA-supported projects mentioned above are as follows:

- **Guinea-Bissau:** New parks and protected areas have been established, along with a protected areas network in the coastal zone that covers over 480,000 hectares, or 13 percent of the country’s national territory. Management effectiveness of four of the five protected areas has increased by at least 15 percent between 2005 and 2010.]
- **Indonesia:** In seven coastal districts throughout eastern Indonesia, 358 villages comprising more than 10,000 people were supported to legally establish community-managed areas of coral reef ecosystems, covering over one million hectares, and with 15 percent set aside as fully-protected ‘no-take’ zones. Destructive fishing practices, such as the use of dynamite, have declined by 60 percent in these community-managed areas over the last six years.

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## Bank Contribution

The World Bank and Bank-managed trust funds are increasingly supporting initiatives to rebuild the ocean's natural capital. Many of the Bank's investments in the oceans over the last five years promote sustainable governance of marine fisheries, the establishment of coastal and marine protected areas, and integrated coastal resource management.

## Partners

The Bank has been working with a number of partners to increase investment in sustainable governance of ocean ecosystem services. These include:

- **The Global Environment Facility (GEF)** has been an integral partner in all of these efforts, with most investments by the Bank blended together with grants from the GEF. In many cases, GEF co-financing has played a catalytic role in attracting Bank and other finance towards investments in ocean governance reforms.
- **The Global Program for Fisheries (PROFISH)** is a multi-donor trust fund created in 2005 and managed by the World Bank to support governance reforms for sustainable fisheries. PROFISH is working actively with a range of partners, including the United Nations Food and Agriculture Organization (FAO), the Organization for Economic Cooperation and Development (OECD), Worldfish, development organizations, and the private sector.
- **The Alliance for Responsible Fisheries (ALLFISH)** was established in 2009 as a public-private partnership by the seafood industry, working together with the International Coalition of Fisheries Associations, the World Bank, FAO, and the GEF, to promote responsible fisheries and aquaculture, particularly in developing countries.
- **Strategic Partnership for Fisheries in Africa** is a partnership led by the Africa Union, with

support of FAO and the World Wildlife Fund and financing from Bank-managed GEF funds, to promote sustainable fisheries in Africa.

- **Capturing Coral Reef and Related Ecosystem Services** partnership aims to capture the value of coral reef ecosystem services through support for eco-enterprises linked to green markets, and other incentives to encourage investment in their protection.

## Beneficiaries

"Since we stopped some of the illegal fishing, Liberians along the coast are able to eat more fish than we were able to eat two or three years ago, or even last year."

Florence Chenoweth,  
Minister of Agriculture, Liberia  
October 2011

## Moving Forward

The opportunity that comes from addressing the challenges to healthier oceans, and the benefits that countries stand to gain from healthier oceans, such as rebuilding fish stocks and expanding sustainable aquaculture, restoring the productivity of key coastal habitats and reducing the threats from pollution, is fundamental to the development mandate of the World Bank. Efforts to date by the Bank, as well as the large number of other organizations supporting healthier oceans, have been somewhat scattered and not sufficient to capture this opportunity. A coordinated global effort is needed to improve the health of the world's oceans and the benefits they provide to the global economy and human welfare. Due to its ability to convene a wide range of partners and stakeholders, and to mobilize public investment for governance reforms, the World Bank is uniquely positioned to coordinate such a global partnership effort. For this reason, the Bank is working to bring small island states and coastal developing nations together with some of the

world's premier ocean-focused organizations and bilateral country partners in a **Global Partnership for Oceans**. The aim is to combine cutting edge knowledge with finance to support workable and “scalable” solutions in 8-10 key ocean areas to improve the management of ocean resources. In each of these priority areas, the Partnership could support a package of investments, including: (i) support to countries for improved management of fisheries; (ii) technical and financial support for

sustainable, well-managed aquaculture operations; (iii) support for the protection of critical coastal habitats that complement better fisheries management and encourage tourism, and (iv) systems and support for reducing land-based sources of pollution going into the oceans. These investments would be supported at the global level by an oceans knowledge portal, as well as a global advocacy and communications campaign.

### LEARN MORE

#### Web Sites

- Global Partnership for Oceans:  
<http://www.globalpartnershipforoceans.org/>

#### Multimedia

- See video at Global Partnership for Oceans:  
<http://www.globalpartnershipforoceans.org/>