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## **Green Investments in the Marine Sector Can Bring Tide of Economic and Social Benefits**

### **Report Spotlights Opportunities for Green Jobs and Growth in Tourism, Transport, Energy and Other Areas**

**Manila/Nairobi, 25 January 2012** – Healthy seas and coasts would pay healthy dividends in a green economy, according to a report released by the United Nations Environment Programme (UNEP) and partners that highlights the huge potential for economic growth and poverty eradication from well-managed marine sectors.

The report, *Green Economy in a Blue World*, argues that the ecological health and economic productivity of marine and coastal ecosystems, which are currently in decline around the globe, can be boosted by shifting to a more sustainable economic approach that taps their natural potential - from generating renewable energy and promoting eco-tourism, to sustainable fisheries and transport.

The report was produced by UNEP in collaboration with the United Nations Development Programme (UNDP), the United Nations Food and Agriculture Organization (FAO), International Maritime Organization (IMO), United Nations Department of Economic and Social Affairs (UN-DESA), International Union for Conservation of Nature (IUCN), WorldFish Center and GRID-Arendal.

It highlights how the sustainable management of fertilizers would help reduce the cost of marine pollution caused by nitrogen and other nutrients used in agriculture, which is estimated at US\$100 billion (EUR 80 billion) per year in the European Union alone.

With five months to go before world governments meet at the UN Conference on Sustainable Development (Rio+20) in Brazil, *Green Economy in a Blue World* presents a case to stimulate countries to unlock the vast potential of the marine-based economy in a paradigm shift that would significantly reduce degradation to our oceans, while alleviating poverty and improving livelihoods.

The synthesis report also examines how Small Island Developing States (SIDS), such as those in the Asia-Pacific and Caribbean regions, can take advantage of green economy opportunities to reduce their vulnerability to climate change and promote sustainable growth.

With as much as 40 per cent of the global population living within 100 kilometres of the coast, the world's marine ecosystems (termed the 'Blue World' in the report) provide essential food, shelter and livelihoods to millions of people. But human impacts are increasingly taking their toll the health and productivity of the world's oceans.

Today, some 20 per cent of mangroves have been destroyed, and more than 60 per cent of tropical coral reefs are under immediate, direct threat.

"Oceans are a key pillar for many countries in their development and fight to tackle poverty, but the wide range of ecosystem services, including food security and climate regulation, provided by marine and coastal environments are today under unprecedented pressure", said UN Under-Secretary-General and UNEP Executive Director Achim Steiner. "Stepping up green investments in marine and coastal resources and enhancing international co-operation in managing these trans-boundary ecosystems are essential if a transition to low-carbon, resource efficient Green Economy is to be realized."

"In the run-up to Rio+20, this report shows that a shift to a Green Economy can if comprehensively implemented unlock the potential of marine ecosystems to fuel economic growth – particularly in small island developing states – but in ways that ensure that future generations derive an equitable share of marine resources and services, added Mr Steiner."

Dr. Linwood Pendleton, one of the contributors to the report, and Director of Ocean and Coastal Policy at the Nicholas Institute for Environmental Policy Solutions, said: "This report provides concrete examples of how emerging ocean industries—including ocean energy and aquaculture industries—can become more profitable, more sustainable, and meet the needs of a growing population without sacrificing the health of our fragile ocean ecosystems."

*Green Economy in a Blue World* lays out a series of recommendations across six marine-based economic sectors.

### **Fisheries and aquaculture**

Approximately 30 per cent of the world's fish stocks are overexploited, depleted, or recovering from depletion and 50 per cent are fully exploited.

According to FAO and World Bank estimates, the world economy can gain up to USD 50 billion annually by restoring fish stocks and reducing fishing capacity to an optimal level.

- Aquaculture, the fastest growing food production sector, is creating new jobs and trade opportunities. But when poorly planned, it can increase pressure on the already suffering marine and coastal ecosystems.
- Adoption of green technologies and investments to lower fossil fuel use could dramatically reduce the carbon footprint of the sector while enhancing its contribution to economic growth, food and nutrition security and poverty reduction. Green technologies include low-impact fuel-efficient fishing methods and innovative aquaculture production systems using environmentally friendly feeds.
- Small-scale producers and traders in developing countries make up the majority of the 530 million fishery-dependent people in the world. Strengthening regional and national fisheries agencies, as well as community and trade fishing associations and cooperatives, will be critical to the sustainable and equitable use of marine resources.

## **Marine transport**

International shipping transports around 90 per cent of world commerce and is the safest, most secure, most efficient and most environmentally sound means of bulk transportation. The sector already benefits from a global regulatory framework and agreements such as the MARPOL Convention, which regulate emissions of air pollutants and energy efficiency measures.

Further greening of the sector could be achieved, argues the report, by supporting countries to implement and enforce standards, switching ships to environmentally sound fuel sources and preventing the transfer of invasive aquatic species transported via ships' ballast water or hulls (the effects of which are estimated to cost US\$100 billion a year), and addressing the technical, operational and environmental aspects of the increasing size of ships.

## **Marine-based renewable energy**

Marine-based renewable energy (wind, wave and tidal) potential is high, yet in 2008 these energy technologies represented just one per cent of all renewable energy production.

Installed capacity is unlikely to become significant until after 2020, because, with the exception of offshore wind energy, most marine-based renewable energy technologies are in the conceptual or demonstration phase. Technical costs also remain a barrier.

Marine-based renewable energy also carries significant potential for green job creation. The type and scale of opportunity will vary according to national context and energy source.

To harness the potential of marine-based renewable energy to drive a green economy, the report recommends:

- Consistent long-term policies, with specific targets for marine-based renewable energy, and targeted financial support from governments to overcome technical barriers. Incentives such as grants, subsidies and tax credits are required to encourage private investment to move from small prototypes to pilot plants.
- Governments need to proactively guide developments to reduce potential for social environmental and legal conflicts and promote synergies with other marine users.

## **Ocean nutrient pollution**

Fertilizers such as nitrogen and phosphorous are essential to global food security and have played a key role in increasing crop yields. But inefficient use of nutrients is contributing to the degradation of marine ecosystems and groundwater, including the formation of oxygen-poor 'dead' zones.

The amount of nitrogen reaching oceans and coasts has increased three-fold from pre-industrial levels - primarily due to agricultural run-off and untreated sewage. This could expand by up to 2.7 times by 2050 under a 'business as usual' scenario.

The report says nutrient pollution and can be reduced – and innovation, public-private partnerships and job creation enhanced – through:

- A 'cyclical approach' including substantial recovery and recycling of waste nutrients
- Policy instruments that include stricter regulation of nutrient removal from wastewater, mandatory nutrient management plans in agriculture and enhanced regulation of manure.
- Subsidies that encourage nutrient recycling

## **Coastal tourism**

The tourism economy represents 5 percent of global GDP and contributes 6 to 7 per cent of total employment. Estimates are that more than one-third of travellers favour environmentally friendly tourism.

There is considerable potential for creating more green jobs in the tourism sector, given that one job in the core industry is shown to create one and a half jobs in tourism-related sectors. Sourcing local products (from sustainable farming and fishing) and safeguarding local culture are examples of where green investments could be targeted.

Key steps outlined in the report include:

- Improving waste management to save money, create jobs and improve the appearance of tourism destinations
- Mobilising multi-sector partnerships and financing strategies to spread the costs and risks of green investments and support small and medium size enterprises (which represent the majority of tourism businesses).
- Investment in energy efficiency, which can generate significant returns within short payback periods
- Cross-sectoral consultation (between governments, communities and businesses) and integrated coastal zone management to help ensure sound development strategies in tourist areas that meet the needs of diverse stakeholders

## **Deep-sea minerals**

Deep-sea minerals are a possible new revenue stream that could support national development goals. However, the deep-sea environment is one of the least understood regions of the planet and there is still only a rudimentary understanding of the ecosystems services that these environments support. Management of these resources must be informed by sound science and best environmental practices applied.

- All stakeholders need to be considered when managing deep-sea mining activities in the context of sustainable use of oceans. Management practices should be holistic, based on an integrated overview of all present and future human uses and ecosystems services.

## **Notes to Editors**

### **Additional quotations from partners**

Dr Peter Prokosch, Managing Director of UNEP/GRID-Arendal, said: "Mining of minerals in the deep-sea provides a unique opportunity for developing countries towards reaching their development goals. Operating in a largely unknown natural environment, it may put additional pressure on already stressed marine ecosystems. However, it can relieve some of the burdens of mining in the terrestrial environment. Careful and responsible planning of deep-sea minerals mining needs to apply the Precautionary Principle, and consider the other sectors and in particular future generations."

Mr. Arni Mathiesen, Assistant Director-General of FAO's Fisheries and Aquaculture Department, said: "The food production potential of the oceans is at risk and with it the livelihoods of hundreds of millions of people who depend on fisheries and aquaculture. If the current trend in unsustainable use of marine resources is not reverted the ability of our oceans to deliver food for future generations is severely compromised. Ocean fisheries and aquaculture are among humanity's best opportunities to deliver highly nutritious food to a growing population. To lose this opportunity would be a crime on future generations."

**Copies of the *Green Economy in a Blue World* report can be downloaded from [www.unep.org](http://www.unep.org) and [www.unep.org/regionalseas](http://www.unep.org/regionalseas)**

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