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Notes & News: MSP study - Fish Carbon - Blue carbon - Mangrove management - MSP game

Study on economic, social, and environmental impacts of MSP cases

To date, studies on ocean planning have generally focused on the process and, to a lesser extent, its potential benefits for conservation and coastal communities. There has been little evidence compiled so far to document the actual impacts of ocean plans in practice.

A new study by the Redstone Strategy Group examines the economic, environmental, and social impacts of five established ocean plans: the US state of Massachusetts, the US state of Rhode Island, the Great Barrier Reef Marine Park, Norway's Barents Sea, and Belgium. The study shows that each of the plans resulted in broadly shared benefits:

- Economically, the plans delivered on average US \$60 million per year in economic value from new industries (primarily wind), and retained value in existing industries;
- Environmentally, plans increased marine protection, ensured that industry avoided sensitive habitat, helped reduce carbon emissions, and reduced the risk of oil spills; and
- Socially, the plans encouraged constructive engagement, broad participation, and marine research transcending the plans themselves.

The study "Ocean Planning's Impact: An economic, environmental, and social retrospective" is awaiting journal publication. For more information, email Jason Blau of Redstone Strategy Group at jasonblau@redstonestrategy.com

The study was the focus of an hour-long webinar hosted by OpenChannels and the EBM Tools Network on 4 December 2014. The webinar recording is at <https://www.openchannels.org/node/8289>

Publication explores new climate change mitigation concept: Fish Carbon

A new report highlights the roles that marine vertebrates - including fish, mammals, and turtles - play in the oceanic carbon cycle, and their potential value in countering global climate change, namely by sequestering carbon. The report refers to this concept as Fish Carbon. It describes eight ecological and physiological mechanisms by which marine vertebrates store carbon or otherwise help to mitigate climate change. The publication's aim is to support mainstreaming of Fish Carbon into marine management, climate change discussions, and scientific research.

"While reducing emissions remains at the forefront of national and international climate change initiatives, the vital role of ocean ecosystems as carbon sinks, including the contribution of marine vertebrates, is largely overlooked in the policy arena and may be undervalued," write the authors. The report *Fish Carbon: Exploring Marine Vertebrate Carbon Services* was jointly produced by GRID-Arendal, a collaborating center with UNEP, and Blue Climate Solutions, a project of The Ocean Foundation. It is available at www.grida.no/publications/fish-carbon

The report was the subject of an OpenChannels webinar on 24 November 2014. A recording of the webinar is at <https://www.openchannels.org/node/8213>

New manual on assessing blue carbon in coastal ecosystems

Coastal ecosystems store significant amounts of carbon from the atmosphere and ocean, and are increasingly recognized for their role in mitigating climate change. A new manual, *Coastal Blue Carbon: methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrass meadows* describes protocols for sampling methods, laboratory measurements, and analysis of blue carbon stocks and fluxes. Produced by the International Blue Carbon Initiative, the manual aims to foster the integration of coastal blue carbon into national climate change mitigation policy and coastal management. The guide is available at <http://thebluecarboninitiative.org/manual>

New publications on mangroves in coastal and marine management

Wetlands International has published two new guides on the roles of mangroves in coastal and marine ecosystem management:

- *The Role of Mangroves in Fisheries Enhancement* walks readers through the science of mangrove forests and their ecological links to adjacent ecosystems. It also makes recommendations for the joint management of mangroves and fisheries, with case studies to illustrate. The 54-page guide is at bit.ly/mangrovesinfisheries
- *Mangroves for Coastal Defence: Guidelines for Coastal Managers and Policy Makers* analyzes the role that mangroves play in defense against waves, storms, tsunamis, erosion and sea level rise, and outlines a practical approach for coastal decision makers. This 42-page guide is at bit.ly/mangrovesforcoastal

Both publications were co-produced with the University of Cambridge and The Nature Conservancy.

New interactive MSP game available

A new, more advanced version of the Maritime Spatial Planning Challenge, a computer-supported game for MSP practitioners, is now available. Jointly developed by the Dutch Ministry of Infrastructure and the Environment, the Technical University of Delft, and the International Council for the Exploration of the Sea (ICES), the updated version follows an earlier iteration released in 2011.

The MSP Challenge gives planners insight into the diverse factors involved in sustainable planning of human activities in the marine and coastal ecosystem. For players, the goal is to plan and manage development in their EEZ from 2015 until 2050 as well as they can. The game's real-time simulator gives players feedback on conflicts, effects, and the overall performance of their planning. The new version, MSP Challenge 2050, focuses on the North Sea and involves seven countries. It was played for the first time in March 2014 with an international group of spatial planning experts in Delft. The 2011 version of the game focused on the Baltic Sea. For more information, go to www.mspchallenge.org

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