

# Abstract

## SESSION 2:

Accelerating Actions for  
Sustainable Development and  
Climate Change

## WORKSHOP 3:

Valuation of Coastal  
Ecosystem Services and  
Benefits and Coastal Use  
Zoning: Tools for Better  
Planning and Implementation

## Assessing and Valuing Ecosystem Services for Ocean Zoning

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Information about marine and coastal ecosystem services can provide a sound foundation for marine spatial planning and subsequent ocean zoning, with the ultimate aim of more effective management. Ecosystem services are the natural by-products of healthy, well-functioning environments and in all environments include provisioning for food and water resources, as well as regulating and supporting functions such as flood control, waste management, water balance, climate regulation, and other processes. Marine ecosystem services are less well understood than terrestrial, yet human reliance on these ecosystem services is significant. Coastal wetlands maintain hydrological balances, recharge freshwater aquifers, prevent erosion, regulate flooding and buffer land from storms. Marine ecosystems supply us with food, recreational opportunity, pathways for transport, places to do research and learn, and spiritual values. Additionally, both coastal and marine ecosystems provide food, shelter, and living space for a broad array of life, in some cases providing essential and unsubstitutable support to wide food webs and biodiversity. In using this information to design management, and specifically to create zoning plans that accommodate uses while protecting ecological functioning and biodiversity, it is critically important that all ecosystem services be considered. In many cases of economic valuation of services driving marine and coastal policy, focus on a single service leads to the undesirable situation in which management optimizes one service at the expense of others, with implications for equity and benefits-sharing. Also problematic is when marine spatial planning focuses only on the ocean, without taking into consideration coastal, watershed, and even upland systems and uses. In these cases, opportunities to use zoning to achieve EBM are missed, and community-based coastal management can be put at risk. Using ecosystem services assessment, social surveys, and valuation can be immensely useful in marine planning that complements coastal plans and allows benefits to be widely shared.



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the Seas of East Asia beyond 2015

## **About Tundi Agardy:**

Dr. Tundi Agardy is an internationally renowned expert in marine conservation, with extensive field and policy experience in Africa, Asia, the Caribbean, the Mediterranean, North America and the Pacific. She specializes in ecosystem services assessment, coastal planning, marine protected areas, fisheries management, and ocean zoning, and has published widely in these fields. She is currently Director of the MARES Program at Forest Trends, which promotes the use of market mechanisms in marine conservation. MARES projects include global conceptual frameworks for innovative financing, tracking of marine markets, and pilot projects in marine ecosystem services and payments in countries as varied as Abu Dhabi, Colombia, Ghana, Greece, the Maldives, Mexico, and Peru.

In order to do broader work on marine issues that can be addressed by the nexus of policy and science, in 2001 Tundi founded Sound Seas -- an independent non-profit based in the Washington DC area. Sound Seas partners with local and international research, education, conservation, and development institutions to promote sustainable use of marine resources and plan for resilience. She is Contributing Editor of Marine Ecosystems and Management (MEAM) and the World Ocean Observer (W2O). Tundi previously served as Senior Scientist for WWF and began Conservation International's Global Marine Program, which she oversaw as Senior Director. She also led the coastal portion of the Millennium Ecosystem Assessment -- the global analysis released in 2005 that represents the consensus of over a thousand scientists on the state of the world's ecosystems. She received her Ph.D. in biological sciences and Masters in Marine Affairs from University of Rhode Island, was postdoctoral fellow at the Woods Hole Oceanographic Institution, and completed her undergraduate work at Wellesley and Dartmouth Colleges in the U.S.