



A Daily Report of the World Ocean Conference

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WOC2009 HIGHLIGHTS: TUESDAY, 12 MAY 2009

ON TUESDAY, 12 MAY 2009, THE WORLD OCEAN CONFERENCE 2009 ENTERED ITS SECOND DAY IN MANADO, INDONESIA. AT THE GRAND KAWANUA CENTRE, A CLOSED SESSION OF THE SENIOR OFFICIALS MEETING CONTINUED DELIBERATIONS ON THE DRAFT MANADO OCEAN DECLARATION. MEANWHILE, AT THE MANADO CONVENTION CENTER, OVER TWO THOUSAND PARTICIPANTS GATHERED FOR THE OPENING OF THE INTERNATIONAL SYMPOSIUM ON OCEAN SCIENCE, TECHNOLOGY AND POLICY.



The opening ceremony of the International Symposium on Ocean Science, Technology and Policy

INTERNATIONAL SYMPOSIUM ON OCEAN SCIENCE, TECHNOLOGY AND POLICY

The International Symposium on Ocean Science, Technology and Policy, taking place 12-13 May 2009, features the presentation of over 500 scientific and policy papers on a variety of themes, including: aquaculture; ecosystem and coastal zone management; marine resources and conservation; marine trade, industry and technology; maritime hazards and pollution; oceanography and climate change; policy, governance and capacity building; and spatial planning. A selection of presentations are summarized below.

Opening Plenary

Freddy Numberi, Minister of Marine Affairs and Fisheries, Indonesia welcomed participants to the Symposium and urged scientists to provide background information on the interaction of oceans and climate change. He called for further cooperation between ocean research and technology development and emphasized the importance

of developing a new approach to ocean resource management that considers the effects of climate change. He thanked participants for accepting the invitation to the Symposium, and hoped the event will enhance knowledge of oceans and climate for present and future generations. Emil Salim, University of Indonesia, presented a keynote address, emphasizing the importance of the Pacific Ocean in regulating the climate system. He also acknowledged the role of Indonesia in the context of the Coral Triangle Initiative (CTI).

Thematic Sessions

Coral Reef Management

During the morning session, four speakers presented on coral reefs, emphasizing their importance as biodiversity hotspots and a source of both economic livelihood and coastal protection for many. Several of the presenters warned of the dire status of corals worldwide, and in

Indonesia in particular, noting that coral can only grow within a narrow thermal, optical and pH range. The speakers described how climate change poses a threat to these conditions by increasing ocean temperatures and ocean acidification, among other concerns. Speakers also highlighted that corals are also vulnerable to: commercial trade pressures, coastal development, marine pollution, physical destruction, and unsustainable fishing. They noted that bleaching is a symptom of environmental stress and is affecting increasing numbers of coral reefs. All of the presenters found reasons to hope that coral reefs could be saved, but only if action is taken immediately to: drastically reduce greenhouse gas concentrations; reduce physical damage to the reefs; establish marine protected areas (MPAs); and create stable financial and livelihood alternatives for local communities to manage, monitor and conserve these resources independently. One speaker explained that such community-based management structures have also benefited from parallel efforts in educating children and teenagers along the coasts about the importance of conserving their coral and coastal resources. Another speaker encouraged Indonesians to charge higher fees for tourists to visit national parks containing coral reefs. In response to a question from the audience, one speaker stated that despite highly effective local MPA efforts, the impacts of climate change are too universal and extreme to discount.

In the afternoon, five speakers considered more specific



Natasha Stacey, Charles Darwin University, Australia

aspects of coral reef management. Two presentations focused on the varying efficacy of different artificial reef structures in different areas to seed and promote the growth of desired coral species. Another outlined a management plan developed at Komodo National Park to render the associated MPA environmentally secure, economically strong, and socially responsible. A fourth speaker showed a video featuring the rapid, six month recovery period of coral following a volcanic eruption that obliterated the reef. The final presentation weighed different options available for reef rehabilitation.

Sharks and Rays

Natasha Stacey, Charles Darwin University, Australia, presented findings of pilot research designed to improve knowledge of whale shark migrations in East Indonesia and create whale shark conservation opportunities for Indonesian fishers. According to Stacey, satellite tracking has shown that these sharks migrate to Indonesia and East Timor, but little is known about aggregation locations, population dynamics, and threats. She said that in response, a pilot project was established to work with Bajo communities in Kupang, Ba'a and Papela. She noted that while Bajo fishers have a cosmological affinity with whale sharks that prevents them from hunting the species, fishers in adjacent areas do not hold such beliefs and actively fish them. She highlighted that whale sharks have often been seen throughout East Timor and Indonesian waters and that an Australian satellite tag was recovered off the Kupang coast. She said that there is not much of an industry based on whale sharks due to low fin prices, emphasizing that most catches have been accidental. Stacey believed that this research has the potential to grow into a monitoring programme or a whale shark sea-ranger group that could supplement the livelihoods of locals through alternatives to illegal fishing. In response to another question on the positive effect of MPAs on whale sharks in Indonesia, Stacey acknowledged that there are some benefits, but that this only provides protection of parts of their migratory trajectory. Katherine Short, World Wide Fund for Nature, presented

on the conservation and management of sharks in the Coral Triangle. Short said that responsible shark utilization consists of responsible management, trade and consumption. She noted that two CTI members are major shark-fishing countries with Indonesia and Malaysia ranked first and tenth in the world, respectively. Short recommended that CTI management plans provide a platform for completing National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks), if they have not already been completed.

Trian Yunanda, Indonesian Ministry for Marine Affairs and Fisheries, spoke on the Draft Indonesian NPOA-Sharks. He told participants that the drafting process is ongoing, with the first meeting in 2005 and the last working group meeting in September 2007. He outlined the draft NPOA structure and details to be covered in the section on Key Actions, and cited financial constraints as the main impediment to completing Indonesia's NPOA-Sharks.

Marine Conservation

Roger McManus, Conservation International, US, presented on the future of the CTI, emphasizing the need to reverse the declining trends of environmental quality and ecosystem services in the region. On funding perspectives for the CTI, he highlighted current investments from Australia, Singapore, the US and the Asian Development Bank, underscoring the need to



Roger McManus, US, Conservation International

assure sustainable funding through stewardship. He noted that the CTI's success depends on the regional and national plans, which have to include goals such as: the establishment of large scale marine management regimes or seascapes; implementation of MPAs and ecosystem management; conservation of biodiversity; and global change.

Craig Starger, University of California Los Angeles, US, presented on inferring patterns of connectivity and defining conservation priorities in the Coral Triangle through the integration of genetics and modeling. Alan White, the Nature Conservancy, US, presented on MPA networks in the Coral Triangle, including lessons from the Marine Learning Partnership. He described MPA networks as a collection of individual MPAs or reserves operating cooperatively and synergistically, at various spatial scales, with a range of protection levels. He acknowledged the large number of MPAs already established in the Coral Triangle region, but noted the lack of information available on connectivity and how well these MPAs have been managed. He said the Marine Learning Partnership evaluated the effectiveness of six MPAs in the Coral Triangle region, noting that illegal, unreported and unregulated fishing and commercial overfishing were identified as major impacts in the area. He stressed the need for capacity building opportunities for MPA managers, noting the lack of understanding about MPA networks among managers and scientists. White recommended that basic planning and management of the MPAs networks be improved.

Beth Polidoro, IUCN, US, presented on the identification of important conservation zones for supporting key biodiversity areas and MPA designation using species-level information in the Coral Triangle. She emphasized that marine conservation planning has largely been conducted in the absence of comprehensive species-specific information, stressing the potential role of the IUCN Red List of threatened species in informing this process. She explained that the IUCN threatened species category includes: vulnerable, endangered and critically

endangered species. Under the IUCN Red List of marine species, she said the Global Marine Species Assessment will consider over 20,000 species by 2012. She concluded that the IUCN Red List data feeds into all goals of the CTI and provides a baseline of available scientific information.

Moonyeen Alava, First Philippine Conservation Incorporated, Philippines, presented on the use of IUCN Red List Assessments as indicators in the CTI. Carissa Klein, University of Queensland, Australia, presented on conservation planning, focusing on coral reef conservation planning. She emphasized the benefits of using MARXAN software to assist zoning for competing objectives, such as conservation and extraction of natural resources.

Sustainable Marine Tourism

Sapta Nirwandar, Ministry of Culture and Tourism, Indonesia, stressed that to be sustainable, tourism must both improve the local community's quality of life and preserve the environment. He highlighted that Indonesia is a mega-diverse country, with the best surfing and diving in the world. He described efforts to promote Indonesian tourism, including online and through trade shows.

Robin Engel, Song Line Cruises of Indonesia, provided recommendations for the sustainable development of the marine tourism industry in Indonesia, stressing that this will increase appreciation for marine resources and prospects for conservation. Regarding cruise ships, he indicated that it is preferable to start with an industry based on smaller vessels and highlighted that fishing vessel over-capacity should be refitted and transformed to serve eco-tourism. He lamented the high levels of garbage littering Indonesia's beaches and said that beach cleaning should be a top priority for communities that want to attract tourism.

Bet Lagarene, University of Waterloo, Canada, remarked upon the rapid growth of marine tourism, adding that this

presents both opportunities and threats. She presented the case of Bunaken Island National Park and the impacts that tourism has had, including disturbance of the coral reef and harassment of fauna, and natural threats, such as the recent outbreaks of the coral-eating crown-of-thorns starfish.

Dita Trisnawan, University of Indonesia, presented on coastal and marine tourism in Indonesia, stressing the importance of understanding the "political ecology of change" that tourism introduces. He noted that the UN Convention on the Law of the Sea identifies tourism as an agent of change, and called for an interdisciplinary approach to evaluating the potential costs and benefits of tourism.

Pedro Fernandez, Polytechnic University of Madrid, Spain, presented on the impact of tourism on coastal Viet Nam, noting that a sharp rise in the numbers of visitors has resulted in rapid and poorly planned development of resorts, and environmental degradation.

Geoffrey Wall, University of Waterloo, Canada, called for an integrative approach to coastal tourism that supports sustainable livelihoods, taking into consideration other economic sectors and non-tourism options. He said that current tourism planning is overly focused on hospitality and often neglects broader planning needs. He presented a joint initiative by Canada and China to implement integrated coastal zone management in Hainan, China with the goal of strengthening institutions and developing human resources through education and outreach activities.

Didin Junaedi, Indonesian Marine Tourism Association, presented on strategic perspectives of small island marine tourism development, emphasizing the need to expand Indonesian tourism beyond Bali. He highlighted current limitations, including lack of infrastructure and skilled human resources, and accessibility of remote islands.