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Announcements

1. World Ocean Conference

The World Ocean Conference (WOC) 2009 is forum for the world community to discuss current issues in the marine field which are related to climate change, in order to achieve an international agreement and draw up an adaptive strategy to use of marine resources wisely for the benefit of humanity. Alongside the main WOC2009 event, there will be opportunities for scientists and experts, NGO members, and journalists to discuss the results of research and the latest developments in science and technology, and establish measures for resolving climate change related problems in the marine and coastal environment, through holding of a number of side events organized within the framework of the WOC2009.

This international conference is set to take place in Manado, North Sulawesi of Indonesia from 11-15 May 2009. For more details, please log on to the official website: <http://www.woc2009.org>

2. ReefBase Pacific



The ReefBase Pacific project is the first regional focus of the global ReefBase project. The Pacific project aims to utilize and strengthen a regional-wide network of stakeholders to generate and mobilize a relevant, user-friendly knowledge-base on coral reef systems. The project has successfully created a variety of information products, in a form of a DVD database, website and printed materials that provide improved access to information for Pacific and global users. The ReefBase team is excited to announce the launch of the latest information product; the ReefBase Pacific Information Portal; Livelihoods, Fisheries and Biodiversity DVD version 2.0. This DVD is a remote copy of an information system which is also available at <http://pacific.reefbase.org>. The collection of data and

system features have developed greatly since the release of DVD version 1.0 and we are pleased to highlight to you these new features:

Pacific ReefGIS is a simple mapping system that allows users to display and explore information relating to reef locations, monitoring activities, threats to reefs, images of reefs etc on interactive maps.

Pacific Reefs is a database that presents information extracted from published status reports; information is provided by country and presented in 4 categories: Resource, Status, Threats and Management. Users can extract relevant information pertaining to these 4 categories with an easy search function tool.

Reef Manager Toolbox provides quick and easy access to manuals and guidebooks that have been designed to assist in the effective monitoring and management of reef resources.

Education Center is a virtual resource center of materials that support reef related education and outreach activities that mobilize information in a non-technical form to communities, school groups and the general public.

In addition, the entire ReefBase team is pleased to be a part of the production and release of the report 'Status of the Coral Reefs of the World' with the Global Coral Reef Monitoring Network. With the support of the Coral Reef InitiativeS of the Pacific, reports from the region have been made freely available on our new DVD and the website <http://pacific.reefbase.org>. Reports on the status of the reefs across the globe are freely available from <http://www.reefbase.org>.

If you wish to receive a copy of the DVD or further information about the ReefBase Pacific project, please drop us an email at reefbase@cgiar.org.

1. SOCMON Global Report

- The world's tropical coasts are home to over two billion people, many of whom live in poverty and depend on coastal resources such as coral reef fish for their livelihood, sustenance, and cultural traditions. This report synthesizes data from individual socioeconomic assessments to quantify and qualify regional and global dependence on coral reef resources, perceptions of resource conditions, threats to marine and coastal resources, and support for marine management strategies such as marine protected areas. Data are included from 49 studies, representing close to 14,000 household surveys conducted in hundreds of communities in 27 countries.

Loper, C., R. Pomeroy, V. Hoon, P. McConney, M. Pena, A. Sanders, G. Sriskanthan, S. Vergara, M. Pido, R. Vave, C. Vieux and I. Wanyonyi, 2008. Socioeconomic conditions along the world's tropical coasts: 2008. SocMon Global Report, 2008. 56pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27174

2. GCRMN, Status of Coral Reefs of the World 2008

- This Status of Coral Reefs of the World: 2008 report is the 5th global report since the GCRMN (Global Coral Reef Monitoring Network), was formed in 1996 as an operational network of the International Coral Reef Initiative (ICRI). The catalyst for GCRMN was the inability of international agencies to report objectively on the health or otherwise of the world's coral reefs. The US government then provided initial funding to set up a global network of coral reef workers to facilitate reporting on reef status; and has continued to be the major supporter of GCRMN and ICRI since the first strategies and action plans were developed in 1995.

Wilkinson, C. (ed.), 2008. Status of Coral Reefs of the World: 2008. Australian Institute of Marine Science, Townsville, 304pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27173

3. The State of Coral Reef Ecosystem of US and Pacific Freely Associated States: 2008

- Called for by the U.S. Coral Reef Task Force's (USCRTF) National Action Plan to Conserve Coral Reefs, this is the first biennial report on the condition of coral reefs. It is the scientific baseline for subsequent reports on the health of U.S. coral reef ecosystems that are to be used by NOAA and others to evaluate the efficacy of coral reef conservation and management practices. The National Oceanic and Atmospheric Administration's National Ocean Service led the development of this report. It was authored by 38 experts and supported by 79 contributors from government agencies and non-governmental organizations across the nation and internationally. Over 100 Task Force members and other notable scientists have reviewed this document.

Waddell, J.E. and A.M. Clarke (eds). NOAA Technical Memorandum NOS NCCOS 73. NOAA/NCCOS Center for Coastal Monitoring and Assessment's Biogeography team, 2008. The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008. Silver Spring. 569pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=A0000004544

4. Herbivore species richness and feeding complementarity affect community structure and function on a coral reef

- Consumer effects on prey are well known for cascading through food webs and producing dramatic top-down effects on community structure and ecosystem function. Bottom-up effects of prey (primary producer) biodiversity are also well known. However, the role of consumer diversity in affecting community structure or ecosystem function is not well understood. Here, we show that herbivore species richness can be critical for maintaining the structure and function of coral reefs. In two experiments over 2 years, we constructed large cages enclosing single herbivore species, equal densities of mixed species of herbivores, or excluding herbivores and assessed effects on both seaweeds and corals.

Burkepile, D.E. and M.E. Hay, 2008. Herbivore species richness and feeding complementarity affect community structure and function on a coral reef. PNAS, October 21, 2008, Vol. 105, No. 42:16201–16206pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27194

5. Ocean acidification causes bleaching and productivity loss in coral reef builders

- Ocean acidification represents a key threat to coral reefs by reducing the calcification rate of framework builders. In addition, acidification is likely to affect the relationship between corals and their symbiotic dinoflagellates and the productivity of this association. However, little is known about how acidification impacts on the physiology of reef builders and how acidification interacts with warming. Here, we report on an 8-week study that compared bleaching, productivity, and calcification responses of crustose coralline algae (CCA) and branching (*Acropora*) and massive (*Porites*) coral species in response to acidification and warming. Using a 30-tank experimental system, we manipulated CO₂ levels to simulate doubling and three- to fourfold increases [Intergovernmental Panel on Climate Change (IPCC) projection categories IV and VI] relative to present-day levels under cool and warm scenarios. Results indicated that high CO₂ is a bleaching agent for corals and CCA under high irradiance, acting synergistically with warming to lower thermal bleaching thresholds. We propose that CO₂ induces bleaching via its impact on photoprotective mechanisms of the photosystems.

Anthony, K.R.N., D.I. Kline, G. Diaz-Pulido, S. Dove and O. Hoegh-Guldberg, 2008. Ocean acidification causes bleaching and productivity loss in coral reef builders. PNAS, November 11, 2008. Vol. 105. No. 45: 17442–17446pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27195

Online GIS

1. Annual / December 2008 NOAA Coral Reef Watch's Satellite Monitoring Products



This map shows the global observations of coral bleaching occurrences combined with NOAA Coral Reef Watch's satellite monitoring products including Sea Surface Temperature, Sea Surface Temperature Anomaly, Bleaching HotSpot and Degree Heating Weeks. These datasets are added into ReefBase Online GIS each month.

To view the latest Annual / December 2008 maps, click here.

<http://reefgis.reefbase.org/redirect.aspx?urlid=24457>

ReefBase::A Global Information System For Coral Reefs

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