

ITMEMS3 Newsletter September 2008

Dear ITMEMS Participants

This is the fourth e-newsletter, offering brief updates and news related to post ITMEMS3 activities and actions around the globe.

The 11th International Coral Reef Symposium (ICRS) Fort Lauderdale, Florida July 2008

From the recent 11th ICRS, a 'Call to Action' was formulated to highlight the need for immediate and decisive action to address the decline of coral reefs. This complements the ITMEMS3 Action Statement which called upon all those committed to supporting the ICRI and the Framework for Action, to take account of and act on the outcomes and recommendations at the international, regional and national levels.

11th International Coral Reef Symposium: Call to Action

2008 is a critical time for coral reefs. At the 11th International Coral Reef Symposium held in July, midway in the International Year of the Reef, over 3000 experts from 75 countries assembled to face some hard truths: coral reefs are teetering on the edge of survival and it is our fault. High levels of carbon dioxide in the atmosphere have produced a lethal combination of hotter and less alkaline seawater. Pervasive overfishing, pollution, coastal development, and physical damage further undermine reef health, and consequently, that of the people and ecosystems depending upon them. A brief overview of the 2632 papers presented can be found on www.nova.edu/ncri/11icrs/outcomes.html

Coral reefs feed, protect, and provide livelihoods for hundreds of millions of people around the world. They create homes for billions of fish and other animals, buffer coastlines from the ravages of storms, and provide rich economic opportunities through tourism and fishing. Their value to society has been estimated at more than \$300 billion/yr. Reefs are the dynamic centers of the most concentrated biodiversity on Earth. Losing coral reefs would rob the world of one of nature's most precious gifts.

Despite these challenges, it is not too late to save coral reefs. The 11th ICRS gave a renewed sense of purpose and hope for the future. A consensus emerged that society has both the knowledge and the tools to bring coral reefs back from the brink. The only question is - will we act?

We have a real - but rapidly narrowing - window of opportunity in which to take decisive action. We must immediately:

- **Cut CO₂ emissions by lowering our carbon footprint and ask our policymakers to commit to low carbon economic growth.**
- **Eliminate open access fisheries in coral reef ecosystems.** Establish and enforce regulations on user rights, total allowable catch, individual catch quotas, non-destructive gear and other sustainable fisheries regulations.
- **Protect coral reef herbivores, including parrotfish.** Ban the harvesting of these species for sale and commercial consumption.

- **Establish and strictly enforce networks of Marine Protected Areas that include No-Take Areas.** Consult with local communities and authorities on design and benefit sharing to maximize returns and build sustainability into the process in order to protect marine biodiversity and restore vital fish stocks.
- **Effectively manage the waters in between Marine Protected Areas.** The enforcement of coastal zoning, environmental impact assessments and "polluter pays" regulations can help control marine and land-based sources of pollution, while strategic environmental assessment can effectively manage coastal development and tourism.
- **Maintain connectivity between coral reefs and associated habitats.** Mangroves, sea grass beds and lagoons contribute to the integrity of reef ecosystems and their continued production of ecosystem services.
- **Report regularly and publicly on the health of local coral reefs.** Include assessments of the effectiveness of management and conservation measures.
- **Recognize the links between what we do on land and how it affects the ocean.** We live on a blue planet - our health depends on ocean health.
- **Bring local actors together to develop a shared vision of healthy reefs and a road map for getting there.** Engage members of industry, civil society, local government and the scientific community to set ambitious targets and performance indicators.
- **Work for change with management to produce desired outcomes.**

Only by taking bold and urgent steps now can we hope to ensure that reefs will survive to enrich life on earth, as they have for millions of years before us. By failing to act we risk bequeathing an impoverished ocean to our children and future generations. We urge you to sign on below to this commitment to action: <http://www.thepetitionsite.com/1/11th-international-coral-reef-symposium-call-to-action>. **Please send to any colleagues that may be interested and encourage them to sign the associated petition.**

The full symposium proceedings are currently being compiled, yet various outcomes are already available on the ICRS website <http://www.nova.edu/ncri/11icrs/index.html>.

- For the Outcomes Overview of the 11th ICRS, please visit: www.nova.edu/ncri/11icrs/outcomes.html
- For more information about the International Year of the Reef, visit: www.iyor.org
- For more information about the International Society of Reef Studies, visit: www.fit.edu/isrshttp://www.fit.edu/isrs

Plenary presentations

The following presentations were given during plenary sessions at the Symposium:

Malcolm McCulloch – “Lessons from the Past”
 Joanie Kleypas – “Helping Coral Reefs Through Climate Change Crisis: Mission possible”
 Roberto Iglesias-Prieto - "Photophysiology, Bleaching, and Adaption"
 Bob Cowen - "Population Connectivity in Coral Reef Systems"
 Drew Harvell - "Drivers of Coral Infectious Disease"
 Daniel Pauly - "Coral Reef Fisheries: A Re-Assessment of their Ecological and Socioeconomic Impacts"
 Terry Hughes (Darwin Medal Lecture) - "Science, Policy and the Future of Coral Reefs"
 Vice Admiral Conrad C. Lautenbacher, Jr. – NOAA Administrator Address
 Richard Aronson – ISRS Presidential Address: Science and Advocacy

All presentations can be found at <http://www.nova.edu/ncri/11icrs/plenaries.html>

ITMEMS Special Session: 'Developing Capacity of Coastal and Marine Managers'

The goal of the International Tropical Marine Ecosystems Management Symposia (ITMEMS) is to develop the capacity of coastal and marine managers to implement programs and projects that support the conservation and sustainable use of coral reefs and related ecosystems at the local, national, regional and global levels. Integral to this is sound coral reef science and the translation of this science into practical actions and strategies for management.

ITMEMS is an opportunity for managers to identify needs that should be filled by science and the scientific community. Equally the International Coral Reef Symposium (ICRS) provides an opportunity to capture the current science and thinking around coral reef and tropical marine ecosystem issues and emerging trends. At the opening ceremony of the recent 11th ICRS, ICRAN encouraged delegates to consider how their work could contribute to effective coral reef management. A challenge was issued to consider how to make science accessible to, and useful for, managers, and to consider how scientists can better inform themselves, and respond to, the needs of managers, to underpin effective management of tropical marine ecosystems.

While attending mini symposia throughout the week, participants were asked to consider:

- What is the most important message from this mini symposium to the management community?
- Is this science relevant to managers? If so what should they do about it?
- Is information from this science available in a form that can help managers influence behaviours?
- What are the priority tasks to improve information available to managers about this matter?
- What do you need from managers to help bridge the divide and apply their science?

Participants were invited to attend the special session with their ideas and thoughts so these could feed into the planning for ITMEMS4 to be held in 2010.

The ITMEMS special session at ICRS sought to highlight the need for strong linkages between the scientific and management communities. During this session the information needs of the tropical marine ecosystem management community were presented along with the need for critical input from and to the scientific community, as recommended at ITMEMS3. The participants of the session identified a number of areas and considerations that should be incorporated into, and addressed at, the next ITMEMS. These included:

- Bridging the divide between science and management
- Watershed management
- Communications - how to target your message to influence the appropriate audience
- Economic valuation and sustainable financing mechanisms
- Applying existing tools and information for management
- Use of stakeholder forums
- Connectivity
- Marine diseases

Other News

Featured Article: Coral reef management and conservation in light of rapidly evolving ecological paradigms.

Mumby P J. & Steneck R S. 2008 *Coral reef management and conservation in light of rapidly evolving ecological paradigms*. Trends in Ecology and Evolution Vol. 23 No. 10, pp 555-563.

The decline of many coral reef ecosystems in recent decades surprised experienced managers and researchers. It shattered old paradigms that these diverse ecosystems are spatially uniform and temporally stable on the scale of millennia. We now see reefs as heterogeneous, fragile, globally stressed ecosystems structured by strong positive or negative feedback processes.

Mumby and Steneck review the causes and consequences of reef decline and ask whether management practices are addressing the problem at appropriate scales. They conclude that both science and management are currently failing to address the co-management of extractive activities and ecological processes that drive ecosystems (e.g. productivity and herbivory). Noting that many reef conservation efforts are directed toward reserve implementation, but that new approaches are needed to sustain ecosystem function in exploited areas.

If you are interested in receiving an electronic copy of the full article please contact Pete Mumby directly using the details below.

Professor Peter J. Mumby
Marine Spatial Ecology Lab
School of BioSciences
Hatherly Laboratory
Prince of Wales Road
University of Exeter
E-mail: p.j.mumby@exeter.ac.uk

ITMEMS3 Secretariat Commitments

Sustainable Tourism Best Practice Case Studies

At the ICRI General Meeting, which followed ITMEMS3, ICRAN committed to bringing together case studies on sustainable tourism to promote best practices. Sustainable Tourism theme coordinators have been contacted, and the second case study showcases Coral Reef Alliance (CORAL) activities under the regional ICRAN Mesoamerican Reef Alliance (MAR) project. Our thanks to Anja Mondragon of CORAL for her efforts in generating this case study. This case study is available for download from www.icran.org

In order to keep track of other interesting stories, initiatives and partnerships that were triggered (directly or indirectly) by ITMEMS3, we would be very grateful if you could please write and let us know what activities you have been involved in to implement the ITMEMS3 recommendations. This information will help to inform preparations for ITMEMS4, and enable the ITMEMS secretariat to report effectively on progress since ITMEMS3.

We look forward to hearing from you soon.