

**From: *Reef Encounter* 35 (2007), pages 17-18**

**Third International Tropical Marine Ecosystems Management Symposium,  
October 16-20 2006, Cozumel, Mexico**

ITMEMS3 - the Third International Tropical Marine Ecosystem Management Symposium - was hosted jointly by the Secretariat of the International Coral Reef Initiative (ICRI) and the Governments of Palau and Japan, in partnership with Mexico's National Commission for Protected Natural Areas and the Municipality of Cozumel (CONANP). It brought together over 300 people from 45 countries, reflecting a broad range of experience of managers, scientists, private sector, NGOs, development and funding agencies.

Convened first in Australia 1998 and a core ICRI activity, ITMEMS aims to strengthen the capacities of coastal and marine managers and their partners to conserve and promote the sustainable use of coral reefs and related ecosystems. The specific aim of ITMEMS3 was to review progress since ITMEMS2 in 2003 (Philippines) and to share and discuss lessons learned in implementing the ICRI Call to Action and the Framework for Action (the four elements of which are: Integrated Coastal Management, Capacity Building for Management, Research and Monitoring; and Performance Evaluation and Review)

The Symposium consisted of 49 workshops based around 13 themes. There were also two special sessions – one on peer-to-peer networking, and the other on the role of local government in coral reef management. An updated Action Statement describing priorities for the next 5-10 years, in the form of some 400 recommendations, was produced. The recommendations concerning 'Research and Monitoring' are summarized in the table. Statements were also drawn up on behalf of each of the main coral reef regions, identifying specific priority needs.

A separate statement on climate change was drafted and adopted, the main action points being:

1. Limit climate change to ensure that further increases in sea temperature are limited to 2 C above pre-industrial levels and ocean carbonate ion concentrations do not fall below 200  $\mu\text{mol. kg}^{-1}$ .
2. Recognise that mass coral bleaching will have similar social and economic consequences as other environmental disasters such as oil spills and droughts and will require similar responses.
3. Facilitate and finance actions to increase resilience of coral reef social-ecological systems, particularly through marine management area networks comprising adequate areas of coral reefs and associated habitats in non-extraction zones, protection of water quality and herbivore populations, and adaptive governance.
4. Facilitate and finance assessments of risk and vulnerability of coral reefs to climate change.
5. Facilitate and finance the development and implementation of coral bleaching response programs, including contingency funding.
6. Create incentives for development of partnerships for adaptation.
7. Increase investments in targeted messages to accelerate adaptation to climate change.
8. Invest in village-to-global education and communication for climate adaptation that will integrate traditional and scientific knowledge into implementation of adaptation strategies for coral reefs around the world.

The proceedings are at the printers and will be available shortly. The digital version will be available for download from the website [www.itmems.org](http://www.itmems.org)

*Nicola Barnard, Senior Programme Officer,  
ICRAN, 219 Huntingdon Road, Cambridge, CB3 0DL, UK.  
+44 (0)1223 277314 ext 288. [info@icran.org](mailto:info@icran.org)*

### Recommendations of ITMEMS 3 in relation to RESEARCH AND MONITORING

ITMEMS 3 Theme <sup>1</sup>	Recommendations for Research and Monitoring
<b>1. Building resilience into coral reef management</b>	<ul style="list-style-type: none"> <li>• Facilitate and finance assessments of risk and vulnerability of coral reefs to climate change</li> </ul>
<b>2. Disaster management and restoration</b>	<ul style="list-style-type: none"> <li>• Baseline monitoring of coastal areas prone to natural disasters to develop and maintain vulnerability mapping</li> <li>• Undertaking more scientific research on cost-effective methods applicable to large scale restoration of marine tropical ecosystems</li> <li>• Study the role of marine tropical ecosystems in coastal protection in different regions of the world</li> <li>• Review available data and information on damage valuation claims worldwide to understand the potential for seeking compensation</li> </ul>
<b>3. Enforcement and investigation</b>	<ul style="list-style-type: none"> <li>• Guidance be provided to resource managers regarding the entire investigation and enforcement process</li> <li>• Enhance the direct application of research and monitoring into assisting enforcement and investigation</li> </ul>
<b>Human impacts</b>	<ul style="list-style-type: none"> <li>• Preparation of inventories of laboratories (in addition to AMLC inventory for the Caribbean) that can handle advanced water quality analysis and ecotoxicology studies for other regions, modelled after the AMLC</li> <li>• Development of regional scale recommendations for water quality standards, and improvement of monitoring of coral disease levels and their inclusion in existing monitoring programs</li> <li>• The continued development of methods for early detection of marine invasive species</li> <li>• Research into methods of eradication of marine invasive species</li> <li>• Research into the ways in which climate change may affect or compound the threat of marine invasive species</li> </ul>
<b>6. Information and knowledge management</b>	<ul style="list-style-type: none"> <li>• Implementation and integration of ecological and socioeconomic monitoring in tropical marine ecosystems management and more effective communication of the results</li> <li>• In planning for research and monitoring, consider not only the financial requirements for data collection, but also for storage analysis and dissemination costs. Provide countries with data management support, tools and training</li> <li>• Improve data archiving and metadata accessibility, with full acknowledgement of partners and sources</li> <li>• Invest in peer-to-peer learning networks to accelerate the implementation and increase the effectiveness of marine resources management</li> <li>• Encourage all countries and regions to assemble status and trend assessments for raising awareness, including the IYOR in 2008</li> </ul>
<b>7. Modelling</b>	<ul style="list-style-type: none"> <li>• Participatory modelling should be used to enhance the legitimacy of models and their use</li> </ul>

<sup>1</sup> There were no separate recommendations relating to research and monitoring for the themes 4. Fisheries and aquaculture, 5. Pollution and disease management, 9. Communication, education and awareness, 11. Sustainable tourism, 12. Partnerships and strategic alliances

<b>and decision support</b>	by decision makers
<b>8. Integrated and participatory strategies</b>	<p>Recognition that social science is fundamental for understanding traditional management systems and appropriate forms of management intervention</p> <ul style="list-style-type: none"> <li>• Both scientific and local knowledge systems, and mechanisms for detecting and reacting to changes in socio-ecological systems, should be harnessed in the development of hybrid management systems</li> <li>• Traditional systems should be respected as partners in management and research, and the sharing of scientific knowledge with communities should be done in a respectful manner</li> </ul> <p>• Recognition that traditional knowledge can be strengthened and enhanced by science, and empower communities in management</p>
<b>10. Economic valuation of marine natural resources</b>	<ul style="list-style-type: none"> <li>• A global assessment of the availability of coastal economic value data and information to identify gaps and focus research</li> <li>• The establishment of centralized and freely available economic valuation database to improve the scope of benefit transfer studies, so that values from one study can be used to evaluate the values for other similar resource or impact situations</li> <li>• An analysis of global best practice in legal frameworks and associated damage compensation approaches to underpin effective marine ecosystems damage compensation claims</li> <li>• Investigation into how economic incentive mechanisms can be better applied, in particular the scope for “payments for ecosystem services” (e.g. off-site fishery benefits and coast protection services) and payments for indirect damages (e.g. sedimentation and greenhouse gas emissions)</li> </ul>
<b>13. Sustainable Financing</b>	<ul style="list-style-type: none"> <li>• Investigate establishing payments for ecosystem services such as fisheries replenishment from no-take zones, and coastal protection by natural resources (mangroves and coral reefs)</li> <li>• Determine costs of management for MPAs and ICM as a foundation for financial planning and develop benchmarks for the evaluation of cost-effectiveness</li> <li>• Monitor improvements in financial performance (revenues and costs) using financial modelling</li> </ul>