

**Workshop Report**  
**4<sup>th</sup> International Tropical Marine Ecosystems Management**  
**Symposium**  
**Learning Exchange 2011**



**David Obura (CORDIO) facilitates discussion of Reef Resilience mapping activity with participating marine resource managers.**  
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## **Background**

The International Tropical Marine Ecosystem Management Symposium (ITMEMS) is a flagship activity of the International Coral Reef Initiative (ICRI). ICRI is a partnership of numerous organizations, government agencies, and non-government groups from all over the world, which work for a common goal of preserving coral reefs and associated habitats. ICRI develops relevant international agreements and conferences to support their goals, including ITMEMS. This year's ITMEMS was sponsored by the ICRI Secretariat of France and Samoa and coordinated by SeaWeb.

ITMEMS aims to develop and 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 goal of ITMEMS4 was to "strengthen the capacities of managers to apply evidence-based approaches, innovative technologies, and emerging science to address management challenges in the local context". ITMEMS4 will combine the exposure to practical activities with targeted training to bridge common gaps in knowledge, science and experience.

The Nature Conservancy assisted in facilitating numerous lessons during the ITMEMS4 conference with other environmental non-government organizations. Presentations and activities were given by experts in the fields of strategic communication, marine spatial planning, reef resilience, facilitation, and many other marine resource-related subjects, including David Obura (Coastal Oceans Research and Development in the Indian Ocean), Stephanie Wear (The Nature Conservancy), Vera Agostini (The Nature Conservancy), Daria Siciliano (SeaWeb), Tundi Agardy (Sound Seas), Lisa Dropkin (Edge Research), Annelise Hagan (Southern Environmental Association), Nicola Barnard (Fauna and Flora International), Kristian Teleki (SeaWeb), Stephanie Kavanaugh (NOAA National Ocean Service), Scott Radway (SeaWeb), Ruben Torres (Reef Check Dominican Republic), and Rich Wilson (Seatone).

## **Objectives of ITMEMS4**

- Encourage knowledge exchange and cooperation
- Demonstrate applications of technology and science in management strategies and programs
- Provide targeted training and skills development of available management approaches and tools
- Develop a network of marine resource professionals to further their development and learning past the ITMEMS4 meeting

## **Methodology**

The ITMEMS4 agenda was designed to present a suite of information from a broad and international range of locations and interests in a short period of time. It was designed to present information to participants that could be incorporated into their work and promote action discussion through break out sessions.

**Day 1:**

ITMEMS began with an opening ceremony with plenary speakers representing the ICRI Secretariat of France and Samoa as well as an opening presentation of agenda items and goals by SeaWeb's Vice President, Kristian Teleki.

The remainder of the day was dedicated to Strategic Communications Training, lead by two facilitators, Lisa Dropkin (Edge Research) and Scott Radway (SeaWeb). Scott Radway began with an activity where participants were asked to get in pairs and tap the lyrics to globally common songs, like "Happy Birthday". This activity was meant to demonstrate communication barriers when scientists use technical terms with non-science audiences. He then gave a presentation on SeaWeb's efforts to communicate environmental and conservation goals and programs to local community members, including scientific and technical trainings to communities and media fellowships.

Next, Lisa Dropkin gave a presentation on the basics and principles of strategic communication, including guidance on how to establish goals based on the "SMART" criteria-based system, identify and define target audience, and how to frame an issue during the development of a communications message.

The first break-out session focused on identifying common problems (relevant to larger organization goals) and identifying a long-term, end goal that was achievable by the "SMART" criteria (specific, measurable, achievable, relevant, time-based). Then, measurable objectives or steps to this goal were to be developed. Groups presented this activity to all conference participants.

In the afternoon, Lisa gave a more detailed presentation on the importance of identifying the correct target of your communications message, how best to frame an issue, and how to develop an effective message. Following this, groups reconvened together for another activity, and using their problems/end goals/strategies from the first break-out session, were asked to identify the target audience and develop a concise message for that target.

The evening session of Day 1 switched gears, focusing on a coaching and mentoring facilitation training by Rich Wilson of Seatone. Participants got into pairs and identified attributes of an effective mentor and protégé, which were then shared to the entire group. Next, participants paired up with a different participant and identified specific attributes of their own professional competencies and skill sets that would assist them in being good mentors. Again, results were shared to the entire group.

**Day 2:**

This day's activities began with a presentation by Kristian Teleki on the Global Trends and Drivers of Change in Tropical Marine Ecosystems. Topics included ocean acidification, climate change, overfishing, and marine protected areas issues. The rest of the day focused on the conservation topic of Marine Spatial Planning (MSP).

All three facilitators, Tundi Agardy, Daria Siciliano, and Vera Agostini gave morning presentations. Tundi Agardy spoke about the general background on MSP and its relation to both MPAs and to zoning outside of MPAs. Vera Agostini presented several projects and case studies from several locations where TNC has used MSP to create zoning regulations, to give examples to participants of the value of this system in conservation. Presentations were followed by a morning activity, where participants were split into four groups and asked to play a MSP board game that was created by SeaWeb. This board game was called

“Trade Off!” and was a role-playing exercise where participants acted as the stakeholder most different from their current positions. Group members (stakeholders) then worked to divide the landscape resources between each of their different interests by trading and buying plots of land.

In the afternoon, participants were again put into break-out groups to answer several questions relating to MSP and their work. In groups, participants identified what specific challenges they face when considering implementing MSP in their locations and what potential solutions could be met in order to address these challenges. Results were shared and then discussed amongst the larger conference members. The MSP session closed with a plenary that synthesized the findings from the afternoon’s break-out sessions as facilitators took challenges and gave examples of how MSP could be used in each situation to address marine resource management.

A launch event for the Best Practice Manual for Lion Fish Control and Mitigation occurred during the evening session of this day, facilitated by Helene Souan and Franck Gourdin and with presentations from Ruben Torres and Leonel Requena.

### **Day 3:**

The third day of the ITMEMS4 conference focused entirely on reef resilience concepts and resilient ecosystems. The session began with a presentation by Stephanie Wear (TNC) on an overview of resilience principles, followed by a presentation by David Obura (CORDIO) on resilience measures and indices as well as mapping techniques.

Next, participants were broken up into groups for two short activities. In the first activity, participants formed a challenge circle and identified the primary challenges that managers face in measuring and monitoring for resilience. Each group identified one specific challenge that was shared by the most members in the group. Groups then discussed ideas for resolving their challenges and summarized suggestions into three key actions to address the challenge. Challenges and actions were reported to the larger conference membership. In the second activity, groups used a handout of resilience indicators to identify the information gaps and current status in resilience monitoring. This information was handed in to David Obura to help him collect data on the state of marine resource monitoring and the needs for each reef location in terms of resilience measurements.

In the afternoon, participants were randomly selected into different groups and completed a resilience mapping activity with the use of several TNC-developed handouts. The objectives of this exercise were to focus on management actions that can be taken based on knowledge of reef resilience, and how mapping facilitates this process. A mapping exercise was applied in a fictional setting, and each group was facilitated to identify what management actions to take based on the information provided.

The reef resilience session closed with a reporting of all activities findings and discussions in order to find synergies between all of the groups. Then, an open discussion amongst all conference attendees occurred on these topics.

In the evening, Nicola Barnard of Fauna and Flora International presented on Ocean Acidification, with a brief overview of the chemistry involved in this topic as well as the potential consequences to marine organisms and ecosystems.

**Day 3:**

Several concurrent sessions occurred during the morning and afternoon of day four. In the morning, sessions were held on Facilitation Training (Stephanie Kavanaugh and Rich Wilson), Sustainable Financing (Thomas Binet), and Monitoring Priority Setting (Annelise Hagan and Ruben Torres). In the afternoon, two sessions on Practical Training and Conflict Resolution (Stephanie Kavanaugh and Rich Wilson) and Field Investigation and Marine Resource Injury Events (Dave Gulko) occurred.

In the evening, all participants attended a second session on mentoring and coaching (facilitated by Rich Wilson), before Kristian Teleki gave a short closing presentation on close remarks to end the conference.

**Results and Evaluation by Participants**

Overall, the conference participants enjoyed the amount of hands-on, group activities that occurred with each session, especially the MSP “Trade Off!” board game that required each players to assume a very different identity related to marine resource management or usage. The size of the conference, ratio of participants to mentors and coaches, and selection of attendees (young professionals early in their careers) was seen as being a very positive aspect of this particular meeting and may ultimately lead to long-lasting professional mentorships.

During the resilience session, many participants commented that the resilience indicators and coral health index matrix could be very useful product of their monitoring data as well as their staff’s time. They commented that using monitoring data to identify most resilient reefs and help guide reef management actions could also help with obtaining funding for monitoring activities. Participants agreed that coral indices would be useful data to show government agencies and decision-makers as they may better understand this system of numerical indices rather than more broad, scientific concepts. Overall, participants were very interested and excited in using resilience concepts and indicators to identify specific management actions at reef locations.

**Annexes**

Annex A – Agenda

Annex B – List of Participants

#### **ITMEMS4: REEF RESILIENCE SESSION OUTLINE**

**Mentors:** Stephanie Wear (TNC), David Obura (CORDIO)

#### **Session outline/emphasis:**

Emphasis: Relevance of resilience for local level decision-making and management strategies.

#### **Plenary Introduction Resilience 101 – Why is it important to me as a manager?:**

All participants engaged in plenary for an introduction to the issue. The session will focus on clear articulation of the goals and relevance of resilience monitoring and management to site level managers – what is it about and what management benefits can it have.

- Setting the context: Resilience & Reef Management – Stephanie Wear
- Resilience Measures & Mapping - David Obura

Panel Discussion/Or Questions - based on the presentations, discussion will be encouraged from the floor, participants exchange their personal interpretation of what resilience means to them. Three key questions will also be prepared for a panel to discuss. Connections with the prior MSP session will be emphasized.

Group activities on Measuring Resilience - a presentation will set the context and methodology for the 3 activities to be conducted in breakout groups.

#### **Module 1 (morning): Current state of measuring/monitoring resilience in MPAs**

In this module, participants will be divided into breakout groups (max 8 per group), to identify the current state and challenges of measuring/monitoring for resilience and using this in management.

Activity A (1 hour) – challenges in measuring/monitoring for resilience – small groups form ‘challenge circles’ where participants identify the primary challenges that managers face in measuring/monitoring for resilience (15 min). Following these, ‘challenge circles’ will discuss their ideas for resolving these challenges (45 min).

Activity B (1 hour min) – state of knowledge and information gaps in measuring/monitoring for resilience - a list of resilience indicators and factors (refined from the IUCN protocol) will be used, for participants to identify where they stand currently and what gaps exist in having a more complete picture of the state of their reefs.

#### **Module 2 (afternoon): Application of resilience principles – mapping and decision-making**

Using a pre-prepared example this session will help managers to apply resilience principles, and will build understanding of the information and capacity gaps preventing the effective application of this information at the field level.

Activity C (1.5 h) Mapping resilience - the objectives of this exercise are to focus on management actions that can be taken based on knowledge of reef resilience, and how mapping facilitates this process. A mapping exercise developed by TNC will be applied in a fictional setting, and each group will be facilitated to identify what management actions to take based on the information provided. Common issues with the MSP session will be emphasized/discussed.

#### **Concluding Plenary (1 hour)**

The session will close with reporting back in plenary, to identify synergies among the findings of each group. These will be organized to emphasize discussion about the findings, with subsequent groups emphasizing only the new/different points than what was stated by earlier ones.

#### **Take-home learning** from the sessions for participants

- participants will be encouraged to note the relevance of each session to their context at home, from which they can draw an action plan to improve the implementation of monitoring/resilience measurement, applying it using mapping tools and using these in decision-making
- the discussions and main points from the breakout groups will be compiled and summarized for the symposium record, and for use by participants at home.

**4<sup>th</sup> International Tropical Marine Ecosystem Management Symposium  
(ITMEMS4)**



**PARTICIPATING ORGANIZATION LIST**

<b>ORGANIZATION</b>	<b>COUNTRY</b>
Forest Trends/MARES	USA
TNC -- Global Marine Initiative	USA
SeaWeb	UK
Roatan Marine Park	Honduras
Moliniere Beausejour MPA	Grenada
ICRAN	UK
IUCN	Guadeloupe
IUCN	France
Nature Foundation St. Maarten	St Maarten
Centre for the Economics and Management of Aquatic Resources, University of Portsmouth	UK
Coastal Zone Management Unit	Barbados
Grenada Board of Tourism	Grenada
Community Centred Conservation (C3)	Philippines
IUCN	
Edge Research	USA
Healthy Reefs Initiative	Honduras
CORAL	Honduras
Toledo Institute for Development & Environment (TIDE)	Belize
Oceanus A.C.	Mexico
IUCN -- Mesoamerican and Caribbean Initiative	
Guadeloupe National Park	Guadeloupe
Institute of Marine and Coastal Research INVEMAR	Colombia
CONANP	Mexico
SPAW Regional Activity Center	Guadeloupe
Hawaii Department of Land and Natural Resources	USA
Southern Environmental Association (SEA)	Belize
Tobago Cays Marine Park	St. Vincent & Grenadin
The Nature Conservancy	USA
Moliniere Beausejour MPA	Grenada
Fauna and Flora International	Kenya
NOAA National Ocean Service	USA
Japan Wildlife Research Centre (JWRC)	Japan
Bunaken National Park Authority, Ministry of Forestry	Indonesia
La Direction de l'Environnement, de l'Aménagement et du Logement (DEAL)	Guadeloupe
St Eustatius National Park Foundation (STENAPA)	St Eustatius, Dutch Car
La Direction de l'Environnement, de l'Aménagement et du Logement (DEAL)	Guadeloupe
National Park of Guadeloupe	Guadeloupe
Dutch Caribbean Nature Alliance	Dutch Caribbean
East African Wildlife Society	Kenya
Oceanus, A.C.	Mexico
Coastal Oceans Research and Development in the Indian Ocean (CORDIO)	Kenya
National Natural Park Corales del Rosario and Islas de San Bernardo	Colombia
Ministry of Agriculture, Lands, Housing and the Environment	Montserrat
SeaWeb	USA
Universidad Autónoma Metropolitana -- Iztapalapa	Mexico
COMPAC	Belize
Coastal Fisheries and Aquaculture, Government	Samoa
Reef Check Foundation Indonesia (FFI partner)	Indonesia

<b>ORGANIZATION</b>	<b>COUNTRY</b>
SeaWeb	USA
SPAW Regional Activity Center	Guadeloupe
SeaWeb	UK
Department of Marine and Coastal Resources	Thailand
Reef Check Dominican Republic	Dominican Republic
DEAL	Martinique
STENAPA	St Eustatius, Dutch Car
The Nature Conservancy	USA
Seatone	USA
The Nature Conservancy	USA