



## **GLOBE Coral Reef Crisis Meeting**

**24<sup>th</sup> October 2010, Nagoya, Japan**

### **Summary of Proceedings**

Prepared by the

### **GLOBE International Commission on Land Use Change and Ecosystems**

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## Introduction

On October 24<sup>th</sup>, 2010 GLOBE International convened a leadership group of parliamentarians from coral reef nations in Nagoya, Japan to participate in the GLOBE Coral Reef Crisis Meeting.

The objectives of the Coral Reef Crisis Meeting were as follows:

- *Raise Awareness:* To increase the knowledge-base of legislators on the impacts of climate change on coral reef ecosystems
- *Motivate Action:* To gain consensus on a parliamentary strategy to support and step-up existing efforts to boost resilience and prevent the loss of coral reef ecosystems and the communities which depend upon them.

Discussion was focused on the recommendations outline within Part II of the GLOBE Marine Ecosystems Recovery Strategy with presentations given by expert advisors on the five key themes of i) Sustainable Fisheries Management; ii) Marine Protected Areas Coverage and Effectiveness; iii) Watersheds and Water Quality Management; iv) Management Capacity and Environmental Awareness; v) Governance.

The official outputs of the meeting were as follows:

- **GLOBE Marine Ecosystems Recovery Strategy: Part II Coral Reef Resilience:** *Second focus of a tri-partite international strategy detailing high-level principles for legislative action to build resilience in tropical shallow-water coral reef ecosystems.*
- **GLOBE Action Plan for Coral Reefs:** *Detailed supporting material outlining a comprehensive set of actions to build coral reef resilience.*

After negotiation both papers were endorsed by the Forum.

The following report provides a summary of the proceedings of this meeting and the presentations and key interventions made by the leading expert advisors and parliamentarians present.

## Meeting Sessions

### Session 1: Welcome and keynote address

The Chair, Hon Barry Gardiner MP (UK), welcomed all the participants to the meeting. Adam Matthews (GLOBE Secretary General) gave a brief introduction to GLOBE and the work of the Commission on Land Use Change and Ecosystems of which marine ecosystems are one workstream. The Chair likened the current human degradation of the oceans to a 'war against ourselves' and stressed the need for a new strategy to prevent this.

His Excellency Jean-Pierre Thébault, French Ambassador for the Environment and Co-Chair of the International Coral Reef Initiative (ICRI) gave the keynote address, providing a background to ICRI's work over the last 15 years to tackle coral reef degradation. Ambassador Thébault proposed that GLOBE and ICRI join forces, avoid duplication and form a partnership to work together to improve legislation and encourage governments to participate in ICRI, thereby raising the profile of coral reef ecosystems in the build up to the Rio+20 meeting in 2012.

## Session 2: The need for an international plan of action for coral reefs

Professor Alex Rogers (University of Oxford), GLOBE's Chief Marine Scientific Advisor, gave a presentation on the need for an International Action Plan for Coral Reefs. Professor Rogers outlined the biological complexity of coral reefs, their economic value and role in supporting millions of people around the world. The main threats of direct anthropogenic and climate change impacts were summarised. The proposals for discussion in the GLOBE Marine Ecosystems Recovery Strategy Part II: Coral Reef Resilience (MERSII) will buy some time for people to adapt to the effects of climate change on coral reefs by increasing their resilience to stress. Coral reef collapse can only be avoided if governments agree to cut carbon dioxide (CO<sub>2</sub>) emissions and bring atmospheric concentrations to a safe level for coral reefs.

## Session 3: Increasing coral reef resilience by reducing human impacts

The Chair (Hon. Noah Idechong, Speaker of the House of Delegates of Palau) provided some background to the vulnerable situation in Palau and other small island states and stressed the need for legislators to listen to the latest scientific information and social situation for coastal communities. The large regional initiatives (Coral Triangle Initiative, Micronesia and Caribbean Challenges) provide hope but more action is needed over the next few years to scale up efforts.

Dr Imen Meliane (Senior International Marine Policy Advisor of The Nature Conservancy) gave a presentation on ways to increase coral reef resilience by reducing human impacts through improved management of fisheries, pollution and coastal development the use of marine protected areas. The need for comprehensive integrated policies and effective partnerships to achieve these was stressed.

### Key interventions

- **Sri Lanka** – asked why Sri Lanka was not included in the Coral Triangle Initiative (CTI) Summit? Provided a national report on coral reef conservation and management for meeting participants.
- **Japan (Okinawa)** – Stressed the need to raise the awareness and interest of ordinary people to the plight of the ocean. Proposed a global coral reef clean-up day, once a year.
- **Indonesia** – The scientific information provided by Professor Rogers should be public awareness in all countries and for different audiences. ICRI should lobby the UN regarding the coral reef crisis.
- **Japan** – Has the effect of sea level rise and changing sea currents been incorporated into the CO<sub>2</sub> concentration and coral reefs simulation provided by Professor Rogers?

### Key responses to interventions:

**Professor Rogers** – Sea level rise is not necessarily a major problem for corals themselves as corals will colonise whatever substratum is available for them. Rising sea level will provide a different set of strata to settle on. In terms of the thermohaline circulation, we don't really understand at what point there will be significant changes in ocean circulation. It is interesting to look back into the past in the context of coral reefs and thermohaline circulation. There have been periods of time when the thermohaline circulation effectively shuts down. The immediate result is probably mass extinction in the deep ocean and flow on effects for oceans and climate. For periods of times when CO<sub>2</sub> levels rose naturally, the result was the collapse of marine life particularly those that secrete aragonite skeletons and shells.

## Session 4: Improving implementation and capacity for effective coral reef management

The Chair, Dr Akhmad Muqowan (Chairman, Commission IV, People's Representative Council of Indonesia) introduced the session and gave a summary of government coral reef management programmes in Indonesia, including the CTI action plans. Raising awareness of coral reef issues in local coastal communities was highlighted as a priority. Regulation of tuna fisheries and the live reef fish trade were also raised as important areas to address.

Dr Leah Bunce Karrer (Senior Director, Marine Management Area Science Program, Conservation International) gave a presentation entitled 'Improving Implementation and Capacity for Effective Coral Reef Management'. The presentation laid out the measures provided in the MERSII document to increase education, training and governance, with examples from a global analysis in twenty coral reef nations over five years. Dr Karrer also proposed a number of new recommendations to improve capacity levels and enforcement which were integrated into the GLOBE Action Plan for Coral Reefs. Again the importance of investing in environmental awareness programmes for coastal communities was stressed.

### Key interventions

- **India** – Committed to conducting a national TEEB report. Recently updated legislation (Wildlife Protection Act and other Acts) to include coral reefs. Recognise positive news when it appears. Interested in financing options for coral reefs.
- **France** – Has taken steps to increase coral reef management in French Overseas Territories by forming a Committee in the French Parliament in 1998. A National MPA agency was also established in 2007 that is responsible for overseas coral reef areas. There is a need for a strong commitment to coral reef protection and a partnership between parliamentarians to enable this.
- **United Kingdom** – Question for the panel of experts: How can we overcome problems associated with legislators working at the local level to help implement community-based marine resource management?

### Key responses to interventions:

**Dr Meliane** – It is important that local customary law and tenure is recognised within the legislative process at the national level. This can help to bring local communities on board.

**Dr Karrer** – Another challenge is that community members must see benefits that exceed the cost of conservation measures and may have a pre-conceived wrong perception. This can be addressed through raising awareness including cross-site exchanges to successful community-based management sites. A second issue is equity and the problem of who benefits. Measures are needed to ensure the local community receive the a fair share of the benefits of management interventions and not just the 'non-local' stakeholders with capital and skills.

This part of the session was wrapped up with a discussion on the use of economic incentives or conservation agreements to reduce impacts on coral reefs by local communities. This was proposed by Dr Karrer but questioned by the Chair (BG) in that additional 'gifts' should not be necessary persuade communities to agree to management measures. Dr Karrer responded by stating that in some cases for poor communities that have no alternative livelihoods there is no incentive to change behaviour and an economic incentive is needed.

Session 4 resumed after lunch with a presentation by Professor Kazuo Nadaoka (Tokyo Institute of Technology) on the importance of reef connectivity in effective MPA

implementation. Professor Nadaoka explained that coastal MPA networks must be designed according to local levels of reef connectivity which can be determined by using larval dispersal simulation models that take into account ocean and coastal currents.

### Key interventions

- **Professor Rogers** - What is the average time using the model trajectories for larval dispersal, and how does that match with larval longevity?
- **Chair (Ambassador Thébault)** – The study emphasises the need for a regional level approach to MPA networks based on scientific knowledge. Is it possible to transfer this technology to other regions as it would be an invaluable tool?
- **Dr Karrer** – Is there a generally accepted figure for how far coral larvae can disperse as this would help to design the MPA networks.

### Key responses to interventions:

**Professor Nadaoka** – (1) In this case the average time is four days for both larval dispersal and longevity so it is an almost perfect match. (2) The technology can be transferred to other regions currently in the computer model and used at different scales. (3) Dispersal distance will depend on the local conditions, especially current strength. In some cases coral larvae can survive for 3-4 weeks and may travel 100 miles with a strong current.

## Session 5: Agreement on the MERS Part II - Coral Reef Resilience

The Chair requested that Professor Rogers go through the Principles for Action on the last page of the MERSII document to briefly explain why each point is important (Details of each justification will be provided in the longer report to be compiled for the meeting). The floor was then opened up for discussion.

**Chair (Barry Gardiner)** – Many of the recommendation are not necessarily new and can be found in more general terms in the original ICRI Framework for Action from 1995. We do need new approaches to complete the recommendations and actions. This is where legislators can make a difference by taking responsibility to ensure successful implementation. The document can be seen as part of a toolkit for legislators to hold governments to account.

### Key interventions

- **Japan** – With regard to point VI (Education and Awareness) it would be good to use 'success stories' to raise the public awareness of conserving coral reef and coastal habitats.
- **Chair** – Success stories would also be useful for legislators to model best practise upon.
- **Japan** – With regard to point IV (Marine Protected Areas) does this need to be no-take or can the language be changed to avoid any misperceptions?
- **Chair** – Also for point IV does 10% no-entry mean 10% of the no-take area or 10% of the total coral reef area? Are there particular coral reefs that should be protected as no-take or no-entry?
- **Sri Lanka** – Regarding MPA designation – will areas be demarcated to the detriment of poor fishers?

### Key responses to interventions:

**Professor Rogers** – No-take means no fishing. Protecting 30% of coral reefs in no-take areas is based on scientific research that shows that this level of protection provides the maximum benefits in terms of overspill of adult fish and increased egg production. These effects can usually be seen in five years and then there is often a demand to increase the protected areas. Closing areas off can be difficult for fishers to understand/agree with but this

is where education and awareness are important, working directly with the people affected and convincing them to use the approach.

In terms of coverage 10% no-entry means 10% of the total area (i.e. one-third of the no-take area).

For no-take designation criteria I refer participants to the CBD definitions of biologically significant areas which take into account a range of factors including biodiversity and endangered species.

Regarding the effects on poor fishing communities, these people are important stakeholders and would be closely involved in the creation of any new protected areas. Their creation is for the long-term well being of the coastal communities.

**Dr Karrer** – The study in my presentation was referring to multiple-use MPAs not just no-take MPAs.

The Co-Chair for this session, Ambassador Thébault, made the final comments stating that this GLOBE work is significant and that legislators should support it so that it can be delivered in parliaments using the GLOBE network of parliamentarians. It is important to scale up the process of coral reef action and not spend another 15 years working on it. Marine issues including coral reefs must be very high on the agenda for the Rio+20 meeting and the next two years are important to achieve this.

## Session 6: Financing for coral reefs

Dr Sam Fankhauser (London School of Economics), GLOBE's Chief Economic Advisor, gave a presentation on a range of donor-based and market-based financing options for coral reefs (which can be found in section 2.3 of the GLOBE Action Plan for Coral Reefs) and when these funds should be available over the short, medium and long-term.

### Key interventions

- **Indonesia** – There can be issues with government legal frameworks to manage funding. Parliaments can play a role in supervising the government's management of funds. Propose that GLOBE works with legislators to ensure proper oversight of funds managed by governments.
- **Dr Karrer** – Question for Dr Fankhauser: What are your thoughts on marine conservation agreements and the use of economic incentives?
- **Chair (Barry Gardiner)** – Securing funding by poor communities is difficult as they need the capacity to create a business plan. How can this obstacle be addressed?

### Key responses to interventions:

**Dr Fankhauser** – Regarding legal frameworks there needs to be an independent monitoring, review and verification (MRV) process that is trusted by the international community. Parliaments are a good way to make sure this happens.

For marine conservation agreements shifting income sources from an unsustainable to a sustainable activity can be powerful. One example is tourism which can work well because of a willingness to pay.

Regarding lack of capacity, this is a development issue that can be addressed through development or environmental assistance from the GEF via UNDP or UNEP.

**Palau** – Palau went through the experience of setting up funding for an MPA network and the Micronesia Challenge using a trust fund. Partnership with NGOs to provide technical support and help build capacity was key to success.

**Chair** – This is a great example from Palau that can be part of the 'toolkit for legislators'

**GLOBE Secretariat** – The GLOBE Action Plan for Coral Reefs contains a legislative mapping section (Appendix 5) that provides case studies of key legislation for a number of coral reef countries.

**Mr Ray Victorine (WCS)** – The Conservation Finance Alliance ([www.conservationfinance.org](http://www.conservationfinance.org)) is a good source of information on sustainable financing and contains a toolkit for innovative financing plus a recent study of trust funds.

**Dr Karrer** – We can send delegates a recently published guidebook on economic incentive agreements.

**Indonesia** – Propose that there is standardisation between countries on how to approach donors and on MRV.

## Conclusions

The GLOBE Coral Reef Crisis Meeting concluded with legislators expressing their commitment to the principles outlined in Part II of the GLOBE Marine Ecosystems Recovery Strategy on Coral Reef Resilience, and to advancing the recommendations detailed with the Strategy and the larger GLOBE Coral Reef Action Plan. Legislators emphasised that funding would be a key determining factor in the achievements of these objectives and the success of ongoing initiatives to build resilience in tropical, shallow-water coral reefs and the people and communities who depend on them.

The next steps for the legislators will be to present the GLOBE Marine Ecosystems Recovery Strategy Part II and the GLOBE Action Plan for Coral Reefs to their parliaments and national governments with the aim of advancing the key priorities agreed in Nagoya. In particular, the GLOBE Secretariat aims to work with legislators at the national level to identify existing policy gaps and ensure that coral reef resilience is prioritised on the international agenda leading up to Rio+20.

## List of delegates

### Parliamentary Delegations:

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#### France

Deputy Jérôme Bignon  
Ambassador Jean-Pierre Thébault

#### India

Baijayant 'Jay' Panda

#### Indonesia

Representative Akhmad Muqowam  
Representative Firman Soebagyo  
Representative Zulbahri

#### Japan

Tomoko Abe  
Chobin Zukeran  
Yazaki Koji

#### Palau

Noah Idechong MP

#### Sri Lanka

Abdul Hameed Mohamed Azwer MP

#### United Kingdom

Barry Gardiner MP

### Expert Panellists:

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#### Professor Alex Rogers

Chief Marine Scientific Advisor to GLOBE  
University of Oxford

#### Dr. Imen Meliane

Senior International Marine Policy Advisor  
The Nature Conservancy

**Leah Bunce Karrer**

Senior Director, Marine Management Area  
Science, Conservation International

**Dr Sam Fankhauser**

Chief Economist, GLOBE  
London School of Economics

**Professor Kazuo Nadaoka**

Tokyo Institute of Technology

**Other Participants**

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**Mr Ray Victurine**

Director of Conservation Finance  
Wildlife Conservation Society

**Mr Adam Matthews**

Secretary General,  
GLOBE International

**Dr Simon Harding**

Marine Scientific Advisor to GLOBE  
Zoological Society of London

**Ms Bethany Gardiner-Smith**

Marine Policy Advisor,  
GLOBE International

**Dr Natasha Pauli**

Scientific Advisor to GLOBE  
Zoological Society of London

**Mr Chris Stephens**

ICLUCE Director,  
GLOBE International

**Ms Elizabeth Clark**

Marine Research Assistant to GLOBE  
Zoological Society of London

**Mrs Nobuyuko Uemura**

Director,  
GLOBE Japan

**Ms Anisha Grover,**

Research Assistant to GLOBE  
Zoological Society of London

**Mr Jinichi Ueda**

Deputy-Director,  
GLOBE Japan