

Tuesday February 24, 2004
US Dept. of Commerce, H.C. Hoover Building , Washington , DC

Education and Outreach Mini-Symposium

“Influencing Perceptions and Behavior: The Role of Outreach and Education In Coral Reef Conservation”

Organized by the Education and Outreach Working Group

Overview: Goals and Content of Symposium

The Mini Symposium included 14 presenters and moderators and was well attended by almost 200 audience members. Below are links to each presentation, as well as notes from the dynamic and productive group discussion synthesizing outreach, education, and communication priorities and needs.

The objectives of the Mini Symposium were two-fold: to share effective outreach tools and success stories, and to address in greater depth a number of outreach challenges and strategies for effectively influencing perceptions and behavior.

Part 1 of the Symposium, “Tools of the Trade: Case Studies on Communicating Coral Reef Messages,” highlighted a variety of outreach campaigns through examples which demonstrate a range of media tools and their application throughout different sectors.

The Symposium's second session was entitled “Effective Outreach and Education: Challenges and Opportunities for Coral Reef Conservation.” To build on the first session, this second group of presenters discussed an important outreach or communications issue from their perspective and experience, and explained how addressing this issue is important to effective outreach to their stakeholder groups and across sectors.

Each speaker was asked to share their experiences as examples of the wide range of organizations working toward coral reef conservation. Although they collectively bring a wealth of experience to bear, their presentations were intended only as a broad sampling in order to stimulate discussion and to perhaps help other participants enhance the effectiveness of their respective outreach programs through this sharing of information.

The Mini Symposium presentations engendered cross-sector discussion of how to build national awareness through effectively communicating with specific audiences and with each other. Ineffective communications not only inhibit effective public education, they can create new management concerns and barriers between sectors. These discussions are part of a larger conversation aimed at recognizing mutual priorities and determining the important next steps for those interested and involved in coral reef conservation and protection. The Education and Outreach Working Group also plans to continue to take a leadership role in coordinating this effort.

Part 1: “Tools of the Trade: Case Studies on Communicating Coral Reef Messages”

Session Moderator: Marlene Kaplan, Acting Deputy Director, NOAA Office of Education and Sustainable Development

1. Tool: Internet Resources

Presenter: Brian Huse, Executive Director, Coral Reef Alliance

Brian Huse spoke about CORAL's use of Internet Resources as a tool for advancing coral reef conservation. Mr. Huse has been the Executive Director of the Coral Reef Alliance (CORAL) since 2002, where he oversees coral reef conservation efforts in the Caribbean , Mesoamerica , and the Western Pacific.

2. Tool: Billboards

Presenter: Marc Pierson, Director, Interrelated Arts Foundation

Marc Pierson spoke about the Interrelated Arts Foundation's use of billboards as vehicles for coral reef messages and Public Service Announcements (PSAs). Mr. Pierson is Director of the Interrelated Arts Foundation (IAF), an NGO based in Massachusetts that advocates for endangered marine ecosystems and species. IAF produces public service announcements in alliance with the Urban Arts Institute at the Massachusetts College of Art, Boston , and MVD of Vienna, Austria.

http://www.mvd.org/billboards04/bb04_dvd/

3. Tool: Museum Displays/Traveling Exhibits

Presenter: Judy Lang, Independent Scientist

Judith Lang discussed her experience creating Museum Displays and Traveling exhibits. She is currently collaborating with colleagues at Florida State University and the National Coral Reef Institute at Nova Southeastern University Oceanographic Center to revise Our Reefs: Caribbean Connections, a traveling exhibition that was developed for the Smithsonian Tropical Research Institute in 1996. Dr. Lang is an independent scientist on the Organizing Committee of the Atlantic and Gulf Rapid Reef Assessment program.

Full Presentation Text

4. Tool: Public Service Announcements

Presenter: David Guggenheim, Vice President for Conservation Policy, The Ocean Conservancy

David Guggenheim discussed The Ocean Conservancy's use of Public Service Announcements and the Shifting Baselines campaign, which joins ocean conservation science with the communication resources of Hollywood in an effort to reach and motivate a broader audience. Dr. Guggenheim is Vice President for Conservation Policy at The Ocean Conservancy, overseeing the organization's policy analysis, advocacy, research, and international work.

Full Presentation Text

<http://www.oceanconservancy.org/dynamic/learn/programs/sb/shiftingBaselines.htm>

5. Tool: Print and Short Film

Presenter: Kristin Valette, Executive Director, Project Aware Foundation

Kristin Valette shared the Project Aware Foundation's use of print and short film to educate divers about responsible and sustainable reef recreation. Ms. Valette is the Executive Director of the Project AWARE Foundation, overseeing all aspects of the including development of all public awareness and education campaign materials.

6. Tool: Roundtables

Presenter: Cindy Knapman, Education Coordinator, Western Pacific Fishery Management Council

Cindy Knapman spoke about the Western Pacific Fishery Management Council's approach to communicating with and involving multiple user groups, including commercial and recreational fishermen. Ms. Knapman is the Education Coordinator for the Western Pacific Regional Fishery Management Council and is based in Honolulu , Hawaii .
Full Presentation Text

Part 2: “Effective Outreach and Education – Challenges and Opportunities For Coral Reef Conservation”

Session Moderator: Michael Hamnett, Director, Hawaii Coral Reef Initiative Research Program

1. Title: The Use of Social Marketing to Build Conservation Constituencies

Presenter: Brett Jenks, President and CEO, RARE

Brett Jenks spoke about developing a “conservation culture,” or establishing local constituencies for conservation. He discussed RARE's use of social marketing techniques to help conservationists change the behavior of individuals and institutions. Mr. Jenks is the President and CEO of Rare (formerly RARE Center for Tropical Conservation), a 30-year old nonprofit organization that protects wild lands of globally significant biological diversity by empowering local people to benefit from this preservation.

<http://www.rarecenter.org>

2. Title: Building an Informed Public: Communicating Coral Reef Science

Presenter: Ashley Simons, Assistant Director of Science Outreach for COMPASS, SeaWeb

Ashley Simons presented results from a variety of recent public opinion polls, highlighting the lack of detailed public knowledge about the state of coral reefs and the importance of the media as an information source. She discussed current barriers to communicating coral reef science; strategies for effectively translating science so that it resonates with non-academic audiences; and upcoming opportunities for sharing new coral reef science. Ms. Simons is the Assistant Director of Science Outreach for SeaWeb's Communications Partnership for Science and the Sea (COMPASS) program. COMPASS, which combines expertise from SeaWeb, the Monterey Bay Aquarium, Island Press, and a board of scientific experts, seeks to advance marine conservation science

and communicate scientific knowledge to policymakers, the public, and the media.

For more information or copies of polling results, please contact Ashley Simons at asimons@seaweb.org.

<http://www.compassonline.org/>

<http://www.seaweb.org>

3. Title: The Role of Volunteers and Monitoring in Coral Reef Conservation

Presenter: William E. Kiene, Director for Conservation Science, Reef Check

Bill Kiene spoke about the role of volunteer monitoring in building local conservation stakeholders and in gathering data in more areas and with greater frequency than scientific inquiry alone can generate. He also discussed the role that volunteer monitoring can play as a vehicle for partnering between governments, NGOs, private businesses. Dr. Kiene is Reef Check's Director for Conservation Science based at UCLA's Institute of the Environment. Since joining Reef Check in 2003, Dr. Kiene coordinates volunteer coral reef monitoring in more than 50 countries around the world.

Full Presentation Text

4. Title: Sustaining Coral Reef Conservation in Developing Countries by Changing Consumer Behavior in Developed Countries

Presenter: Sylvia Spalding, Communications Director, Marine Aquarium Council

Sylvia Spalding spoke about the key role consumer demand plays in the success of MAC's efforts to transform the marine aquarium trade through MAC Certification. She discussed some of the approaches MAC has utilized to overcoming the hurdle of communicating with consumers. Ms. Spalding is the Communications Director at the Marine Aquarium Council. Her experience spans 20 years and combines fisheries/marine conservation and journalism.

Full Presentation Text

5. Title: Building Future Communicators through Science Education

Presenter: Billy D. Causey, Superintendent, Florida Keys National Marine Sanctuary

Billy Causey spoke about the Florida Keys National Marine Sanctuary's Education and Outreach Plan as a tool for managing resources by incorporating stakeholders on a variety of different fronts, including community-, school-, media-, and technology-based initiatives, as well as partnerships and product development. He also discussed the larger importance of developing an ocean ethic. Mr. Causey has managed National Marine Sanctuaries in the Florida Keys since 1983. He has served as the Superintendent of the Florida Keys National Marine Sanctuary since 1990.

6. Title: Hawaii 's Living Reef Program: Potential First Steps Towards a National Initiative?

Presenter: Athline Clark, Special Projects Program Manager, Hawaii DLNR Division of Aquatic Resources

Athline Clark discussed Hawaii 's Living Reef Program as an example of a statewide coral reef conservation initiative that might serve as a model for national action. Clark is the Special Projects Program Manager for the Hawaii Division of Aquatic Resources. She oversees the State's coral reef program and is the Governor's designated Point of Contact (POC) for Hawaii to the US Coral Reef Task Force (CRTF).

Discussion Highlights: Identifying Cross-Cutting Themes and Priorities

At the conclusion of the Mini Symposium presentations, there was a question and discussion session, which provided presenters and audience members with an opportunity to synthesize priorities and key concerns as informal recommendations for the Education and Outreach Working Group and Task Force member agencies. Follow the link above for a summary of these discussions and identified priorities and needs, grouped by topic.

Science Panels

Organized by the Education and Outreach Working Group

Panel 1: Assessing Effects of Land-based Sources of Pollution on Coral Reefs: Current Science, Case Studies, and Tools

Session Moderator: Howard Hankin, National Aquatic Ecologist, USDA, Natural Resources Conservation Service Ecological Sciences Division

Title: Overview of the Current Science on Land-based Sources of Pollution

Presenter: Professor of Biology, College of Charleston

- Dr. Dustan presented an overview of the current state of coral reef ecosystems and how they are being impacted by non-point sources of pollution.
- It is important that we restore the natural hydrologic flow around watersheds systems around the entire coastal zone.

Title: Tracing the Path of Sewage from the Land to Coral Disease in the Florida Keys

Presenter: James Porter, Professor of Ecology, University of Georgia

- Dr. Porter presented the relation that exists between the sewage discharges and the impacts on coral reef ecosystems.
- The Florida Key West region as well as the rest of Florida should upgrade their sewage treatment systems to tertiary treatment plants. This upgrade will involve a lot of money, effort and time.

- High nutrient loads were found near shore decreasing with decreasing concentrations of nutrients when sampling further away from near shore.
- Human gut bacteria from the *Serratia spp.* Were found on coral tissue.

Title: Identifying the Effects of Land-based Sources of Pollution on Coral Reef Health

Presenter: Cheryl Woodley, Coral Disease and Health Consortium, NOAA National Centers for Coastal Ocean Science

- Dr. Woodley showed how we could use a crime scene investigation approach to resolve and identify the cause of impact to coral reefs. We should look for the smoking gun when assessing the damage to reefs.
- Many of the responsible factors that have negative effects on human are doing the same to coral reef ecosystems.
 - Q. What is the importance of using a crime scene approach to assess damage to reefs.
A. The importance of finding the smoking gun is figuring out what tools and technology have to be used to unveil the crime.
 - Q. How can we get access to scientists and resources on the ground?
A. There are people in state government, federal agencies, and academia that can be contacted to help with the monitoring efforts.
 - Q. How can we connect the algal overgrowth with the landfills near the coast?
A. Using a crime scene investigation approach when doing the damage assessment.

Title: Reefs at Risk: Spatial Indicators of Threats from Land-Based Sources of Pollution

Presenter: Jon Maidens, Associate for the Information Program, World Resources Institute

- Mr. Maidens gave an update on the Reef at Risk initiative which classifies and categorizes watersheds and other areas by sediment risk and a sub-regional by way of measuring degree of impact from non point sources of pollution.
- Watershed areas are identified and partitioned using factors like “relative erosion” that depend on slope of the watershed, precipitation, soil characteristics, land cover type, etc.
- Q. What about ground water run-off, has this been use to classify sites?

Title: The Island School of Eleuthera, A Local Case Study of Island Sustainability

Presenter: Chris Maxey, Director, Head of Humanities, The Island School

- Mr. Maxey presented an example how a community can use resources in a way that they won't harm the ecosystem.
- Communities can find alternatives ways to dispose their sewage discharge reducing impacts to the environment.

- Use of hydroponics systems to grow plants, aquaculture and windmills are examples of sustainable development.

Science Panel 2: Assessing Effects of Climate Change on Coral Reefs: Current Science, Case Studies, and Tools

Session Moderator: Rafe Pomerance, Chairman, Climate Policy Center ; Former Deputy Assistant Secretary of State for Environment and Development

Title: Overview of Climate Change and Coral Reefs - An Update on the Latest Science Presenter: Rob van Woesik, Associate Professor, Department of Biological Sciences, Florida Institute of Technology

- Dr. Woesik suggested that we have to determine if coral reefs will adapt to the changes in CO₂ atmospheric levels, sea level changes, changes the alkalinity of water and increases in sea surface temperature.
- There is reason to believe that some zooxanthellae are more resilient to others against different stressors.
- We have to identify and protect resilient coral reef ecosystems from anthropogenic impacts.

Title: Recent Trends in SSTs and Bleaching Events – Coral Reef Watch

Presenter: Al Strong, National Oceanic and Atmospheric Administration

- Mr. Strong presented how NOAA is using satellite imagery to determine sea surface temperature (SST) changes around coral reef ecosystems and how this technology is used to predict coral bleaching.
- The Great Barrier Reef Australia Heron Island was identified as a site with SST higher than normal and as a result coral bleaching took place.
- We need to increase the monitoring in and around coral reef ecosystems.

Title: Managing for Ecological Resilience in the Face of Climate Change: Cooperative Research

Presenter: Terry Done, Australian Institute of Marine Science

- More resilient reefs systems will have better changes to survive from mortality events
- Dr. Done presented the framework used in the Great Barrier Reef system for managing reefs resilience which is based in prediction of outcome, strategize, and support management, enhancing recovery of the system.
- Q&A What is the possible expansion of bleaching in GBR, A: Not been documented yet but may start seeing on islands near New South Wales.

Title: Strategies to Improve Resiliency – Guidelines to MPA Design in An Era of Climate Change

Presenter: Phil Kramer, Director of Caribbean Marine Programs, The Nature Conservancy

- We need new response strategies for global problems like climate change.
- Fine scale SST helps understand localized variability in bleaching events.
- Shading reduces thermal stress.
- Developing model for TNC: representation and replication, refuge, connectivity, effective management and resiliency.
- We need to understand all the different reef types and fully protect resilient communities.