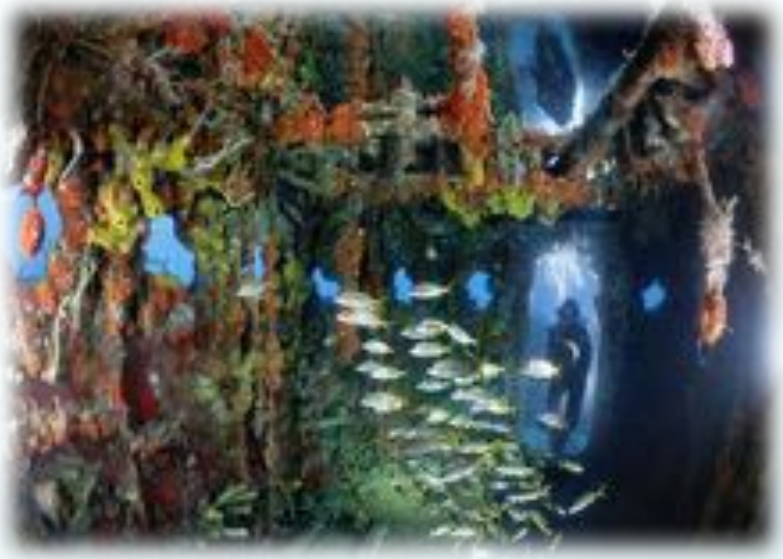
National Artificial Reef Workshop

June 9 – 10, 2016

Pre-Workshop Survey
Key Findings and Themes



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COLLABORATIVE SOLUTIONS FOR A SUSTAINABLE FUTURE

Presentation Outline

- Survey Purpose and Process
- Key Findings and Themes of Survey Results
  - Accomplishments, Opportunities and Challenges
  - Coordination and Partnerships
  - Workshop Topics of Interest
- Steering Committee Collaboration to Develop Workshop Agenda

Survey Purpose and Process

- Gather perspectives from a cross-regional set of professionals directly involved with or connected to artificial reef programs
  - Artificial reef program managers
  - Regulators and policy specialists
  - Regional Councils and Interstate Marine Fisheries Commissions
  - NGOs, scientists and recreational/commercial fishing interests
- Inform a national level workshop agenda by identifying…
  - Accomplishments in artificial reef application
  - Opportunities and challenges facing artificial reef programs
  - Science advances and outstanding knowledge gaps
  - Lessons learned since the 2007 National Artificial Reef Plan

Survey Implementation

- Development of standardized questionnaire
- Online survey distributed to nearly 100 diverse parties
- Survey open for five weeks – received 45 responses
- All responses non-attributable to individual or agency/organization
- Survey results utilized to inform agenda development process

Key Survey Findings and Themes

Accomplishments, Opportunities and Challenges, and Lessons Learned

Artificial Reef Accomplishments

Most common themes included the following…

- New projects in many locations (sinking of ships commonly cited)
- Range of science advancements
  - Improved monitoring, evaluation and use of technology
  - Better understanding of reef function and ecological benefits
  - Studies revealing socioeconomic impacts
- Design improvements – objectives, materials, fishing enhancement
- Maintenance and establishment of AR special management zones
- Updating of the National Artificial Reef Plan (2007)

Artificial Reef Opportunities

Wide range of responses. Key findings and themes included…

- Continue scientific studies to better understand artificial reefs
- Restore habitat and improve shoreline protection
- Enhance recreational and commercial fishing opportunities
- Promote different AR types (Vessels, Rigs-to-Reefs, Reef Balls etc.)
- Explore new opportunities for materials and design
- Potentially apply artificial reefs as marine protected areas

Artificial Reef Challenges

Also a wide range of responses. Most fell under the following themes…

- Permitting and management of artificial reef uses
- Science challenges and unanswered questions
- Design, construction and materials challenges
- Lack of funding, staffing and agency support

Science Advances

Common themes included…

- Significant improvements in monitoring and mapping reefs
- Application of new technologies (many linked to monitoring efforts)
- Useful design/reef function lessons (e.g. best materials, siting, impact with specific species etc.)
- Cooperation between universities and state AR programs

Science Gaps

Wide range of responses, including…

- Most common response was aggregation versus production debate – however some recommend planners move past this issue
- Lack on long-term monitoring/long-term studies
- Need better understanding of siting/habitat needs
- Questions about species life history and links to reef function
- Questions about the impacts of recreational fishing effort
- Lack of funding/staff capacity to evaluate artificial reef effectiveness

Lessons Learned

Respondents asked to identify lessons learned across several topics

- Artificial reef program planning
- Siting, construction and development
- Project coordination and/or partnerships
- Monitoring, evaluation and applied science
- Governance, permitting, managing and maintaining ARs
- Research and applied science

Key Survey Findings and Themes

Coordination and Partnerships

Agencies, Organizations and Communities

Most common responses when asked how to improve coordination…

- Increase and improve communication and information sharing
- Improve coordination between all key players
- Advance the science, publish and create a shared database
- Engage relevant stakeholders and build partnerships
- Define clear program/project goals and objectives
- Hold regular regional and national workshops
- Clarify and streamline the permitting process

Permitting and Inter-Agency Coordination

How agencies can improve permitting and coordination…

- Maintain a consistent, clear and streamlined permitting process
- Enhance communication, collaboration and information sharing…
  - Between responsible federal agencies
  - Bewteen Regional Councils, Interstate Commissions and States
  - With NGOs and other relevant stakeholders
  - Across regions so lessons learned can be broadly beneficial
- Get involved with artificial reef permit applicants early in the process
- Fund research that informs future artificial reef design

Key Survey Findings and Themes

Workshop Topics of Interest

Ranking Topics of Interest

	First priority	Second priority	Third priority	Fourth priority
State of the science	56%	36%	3%	5%
Regional updates and lessons learned	26%	31%	23%	20%
Potential future direction of artificial reefs	20%	28%	30%	22%
State/federal and other partnerships	8%	13%	38%	41%

Outcomes of a Successful Workshop

Common themes from survey responses included the following…

- Guidance on future planning
- Improved education, knowledge and understanding
- Benefits derived from lessons learned
- Improved coordination, communication and commitment
- Clarity on science, management and policy issues
- Insight on how to manage conflict and find agreement
- Improved funding landscape

Steering Committee Collaboration

Agenda Development and Recruitment of Guest Presenters

Steering Committee Collaboration

A diverse groups of AR experts helped craft the workshop agenda

- Five meetings held from December 2015 – May 2016
- Provided input on pre-workshop survey and considered results
- Reviewed and refined several iterations of the workshop agenda
- Brainstormed and refined key science topics for discussion
- Helped secure guest presenters; some agreed to present

Thank you to the steering committee for initiating the kind of collaboration we hope will continue during this workshop!

End of Presentation

Brief comments or questions

Thank you!