



How is your MPA Doing?

Results from the testing of natural and social indicators of management effectiveness at 19 MPAs around the world

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Why Measure Management Effectiveness?

- Adaptive Management
- Project Planning and Priority Setting
- Accountability

Very few MPAs have a consistent record of activities and enough data to perform evaluations

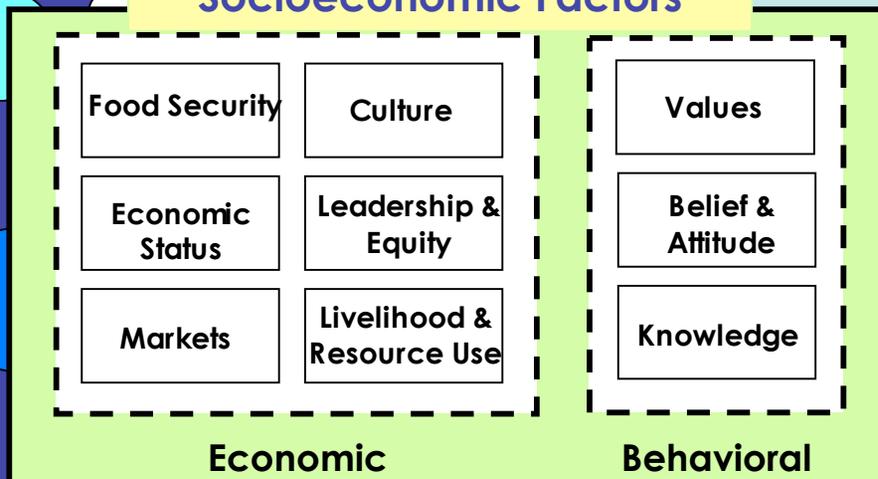
Very few MPAs are able to document whether Goals and Objectives are being achieved (some of them are difficult to measure)

MPA-MEI Objectives

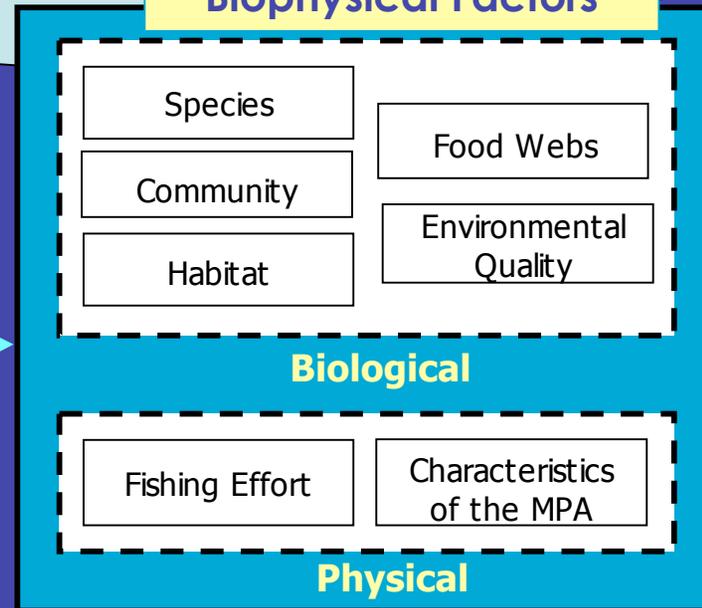
- **Develop MPA-specific indicators and a guidebook for MPA managers**
- **Field-test and refine indicators and guidebook based on pilot projects**
- **Increase awareness and use of monitoring and evaluation in MPAs**

MEI Conceptual Framework of MPA Interactive Conditions

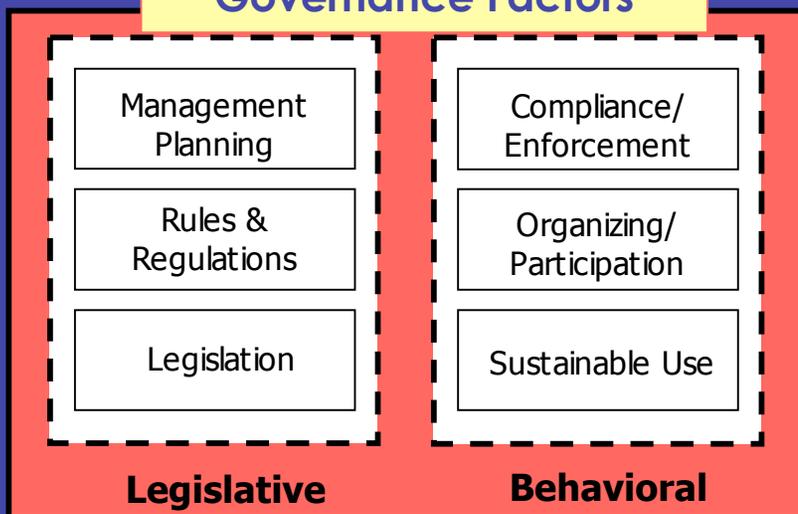
Socioeconomic Factors



Biophysical Factors



Governance Factors



MPA-MEI Process

Planning (2000)

Designing and Selecting
Indicators (2001)

Testing Indicators &
Guidebook (2002-2003)

Analyzing Testing Results &
Peer Reviews (2003)

Publishing Final Guidebook
and Implementing
Guidelines (2004-present)

Pilot MPAs

- 23 sites volunteered for testing
- 19 sites completed testing
- 6 sites from N. America

Second Phase

Translations

Lessons on
implementing the
evaluation

Training
workshops (upon
request)

Pilot Sites that Completed Testing



1. Achang Reef Flat Marine Preserve, Guam
2. Banc d'Arguin National Park, Mauritania
3. Banco Chinchorro Biosphere Reserve, Mexico
4. Bird Island Marine Sanctuary, Commonwealth of Northern Mariana Islands
5. Bunaken National Park, Indonesia
6. Channel Islands National Marine Sanctuary, USA
7. Far Eastern Federal Marine Reserve, Russian Federation
8. Galapagos Islands Marine Reserve, Ecuador
9. Hol Chan Marine Reserve, Belize
10. Lenger Island MPA, Federated States of Micronesia
11. Loreto Bay National Park, Mexico
12. Mafia Island Marine Park, Tanzania
13. Miramare Marine Nature Reserve, Italy
14. Piti Bomb Holes Marine Preserve, Guam
15. Saguenay-St. Lawrence Marine Park, Canada
16. Sian Ka'an Biosphere Reserve, Mexico
17. Tubbataha Reef National Marine Park and World Heritage Site, the Philippines
18. Tumon Bay Marine Preserve, Guam
19. Upper Gulf of California and Colorado River Delta Biosphere Reserve, Mexico

MPA-MEI in North America

Number of Indicators Tested

Channel Islands National Marine Sanctuary

- 2 Biophysical
- 2 Socioeconomic
- 2 Governance

Saguenay-St. Lawrence Marine Park

- 9 Biophysical
- 6 Socioeconomic
- 6 Governance

Upper Gulf of California Biosphere Reserve

- 4 Biophysical
- 4 Socioeconomic
- 2 Governance

Sian Ka'an Biosphere Reserve

- 4 Biophysical
- 4 Socioeconomic
- 7 Governance

Loreto Bay National Park

- 1 Biophysical
- 2 Socioeconomic
- 0 Governance

Banco Chinchorro Biosphere Reserve

- 4 Biophysical
- 4 Socioeconomic
- 9 Governance



General Characteristics of the Pilot Sites

Natural setting (#sites)

- Temperate 4
- Sub-tropical 3
- Tropical 11

Management Approach

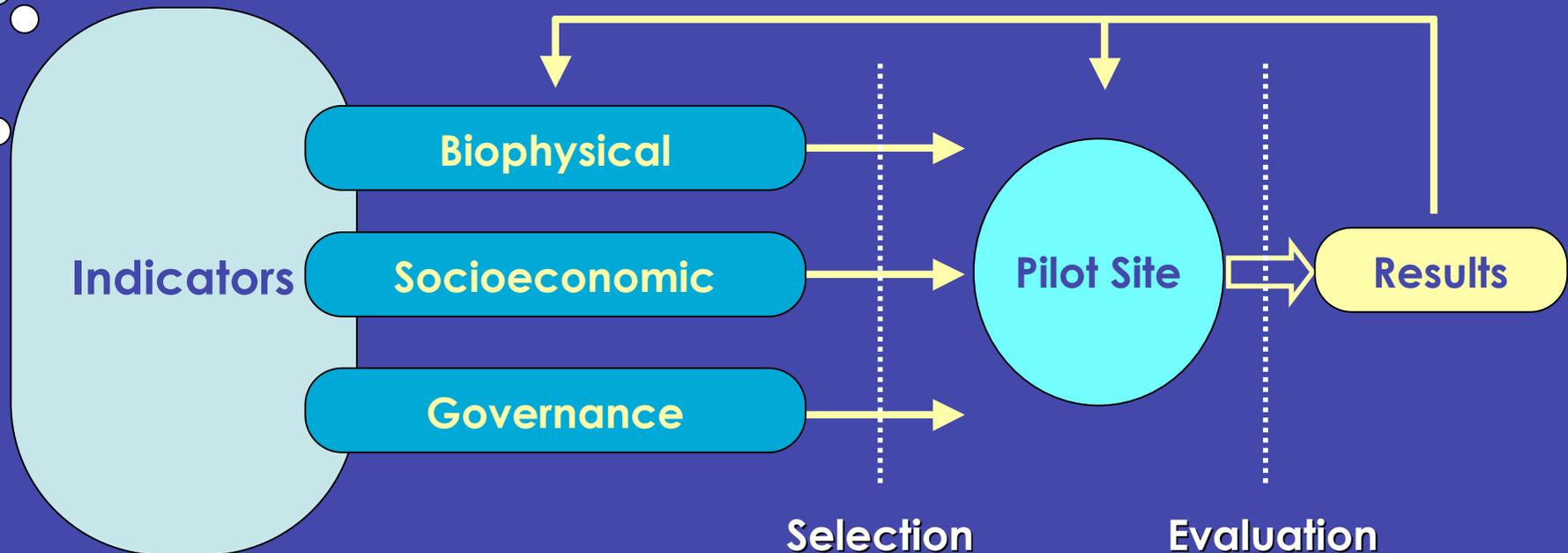
- Conventional 10
- Co-management 6
- Community-based 2

Size (average #)

- Small (<100 km²) 6
- Medium (100-1000 km²) 4
- Large (>1000 Km²) 8

Criteria for Selecting Indicators and Feedback from Pilot Sites

- Indicator selection is based on the goals and objectives of each individual site plus its management plan
- The selected indicators must be the most appropriate for measuring the management effectiveness of each particular site



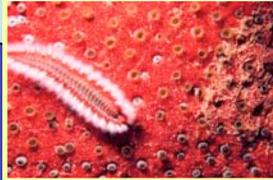
General Results from the Field Testing



Identified Constraints for Performing Evaluation

- Lack of professional and technical capacity, especially for Socioeconomic and Governance indicators
- Lack of time, resources and evaluation experience
- Difficulty in accessing some areas of large MPAs
- Difficulty in obtaining local population's participation
- Lack of clear definition and understanding of the MPA goals and objectives

General Results from the Field Testing



All sites were able to match their goals and objectives against the appropriate indicators using the guidebook

- All indicators found to be useful for adaptive management purposes, especially governance indicators
- Need for increased understanding and focus on socioeconomic and governance aspects of MPAs
- Need for guidance on MPA design and management planning
- Need for MPAs to prioritize adaptive management within overall management process
- Need for guidelines on use of results
- Need to develop analysis methods that account for timing issues of different indicators

Lessons Learned from Pilot Sites

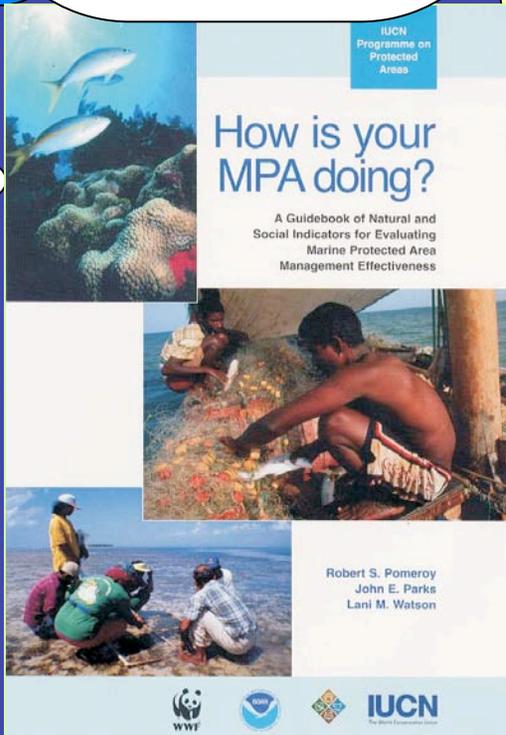


- Clarify and/or re-define MPA goals & objectives
- Expand monitoring beyond biophysical characteristics
- Involve community in MPA management
- Hire or train specialized staff for the oversight of monitoring and research activities
- Keep good records of technical staff activities, especially for governance indicators
- Develop significant sampling & sampling training (especially for biophysical indicators)
- Use evaluation results to modify working plans (adaptive management)
- Strengthen institutional cooperation

Structure of the Guidebook

Parts of the Guidebook

- Outline the process for conducting an MPA evaluation
- Describe the indicators that would be measured in an evaluation



10 Biophysical Indicators

5 Goals; 26 Objectives

16 Socioeconomic Indicators

6 Goals; 21 Objectives

16 Governance Indicators

5 Goals; 21 Objectives

Information on each Indicator

- Name of indicator
- Goals/objectives related to indicator
- How difficult is it to measure?
- What is...? (*definition*)
- Why measure it? (*purpose/rationale*)
- What is required to measure it? (*resources*)
- How are data collected? (*method*)
- How are results interpreted/shared? (*analysis & communications*)
- Outputs
- Strengths and limitations
- Example (*from a pilot site*)
- References/useful information

4-Step Process to use the Guidebook

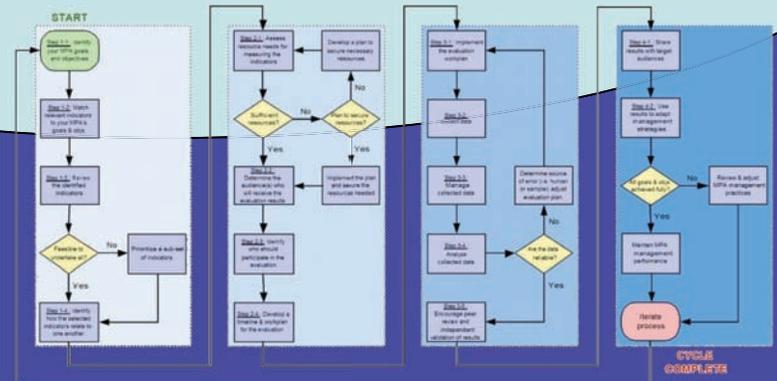
**Identify the
MPA Goals and
Objectives**

**Selecting
Indicators**

**Planning
Evaluation**

**Conducting
Evaluation**

**Communicating
Results and
Adaptive
Management**



Major Outputs of the MEI Process

Small Grants Program

- NOAA International Coral Conservation Grant
- National Fish and Wildlife Foundation (NFWF)

Capacity Building

- The U.S. National MPA Center will train MPA managers in the U.S. using the MEI Guidebook
- WWF will implement the guidebook in sponsored sites

Outreach

- Communication plan 2004-2005
- Guidebook is being translated into Spanish and French to reach a wider audience

MEI Follow-up



International outreach (partnerships with strategic regions, programs and/or sites)

Implement evaluation programs into working plans of selected MPAs

Document the “process experience” of implementing evaluation in 3 sites (Galapagos, Loreto and Miramare)

IMPAC 2005

Contact the MPA-MEI Team



<http://effectiveMPA.noaa.gov>

