North Central Coast MPA Monitoring Planning Workshop

October 22-23, 2008

Pacifica, CA

Marine Protected Areas Monitoring Enterprise

Introductions

Workshop Objectives

Broader objective: Inform the development of a monitoring plan for North Central Coast MPAs

- Develop a set of **ecosystem features** that define the scope of status & trends monitoring
- Develop a set of priority **effectiveness questions** to inform future management decision
- Launch **scientific working groups**
  - Develop, evaluate, and recommend **attributes and indicators** for each ecosystem feature
  - Develop and evaluate **approaches** to address priority effectiveness questions and recommend **information** to be collected

Agenda Overview – Day 1

10:00 AM	Welcome and Introductions
11:00 AM	Overview and Project Framing
12:00 noon	*Lunch (provided for invited participants)*
1:00 PM	Introduction to Status & Trends Measures and Ecosystem Feature Selection
3:30 PM	*Coffee Break*
4:00 PM	Charge to Scientific Working Groups: Status & Trends Measures
4:45 PM	Public Comment
5:30 PM	*Adjourn*
6:30 PM	*Dinner (provided for invited participants)*

Agenda Overview – Day 2

7:00 AM	*Breakfast (provided for invited participants)*
8:00 AM	Review Day 2 Agenda and Recap Day 1
8:15 AM	Introduction to Effectiveness Measures and Identification of Effectiveness Questions
11:00 AM	*Coffee Break*
11:30 AM	Charge to Scientific Working Groups: Effectiveness Measures
12:00 noon	Public Comment
12:30 PM	Next Steps and Workshop Close
1:00 PM	*Workshop Adjourn*

Process Guidelines

- Please speak to the focus and objectives of this workshop
- Everyone will participate and help keep the process on track
- Everyone’s voice is equally valid in the exercises
- Participants will respect each other’s personal integrity, values, and legitimacy of interests
- Start on time; end on time
- Please turn cell phones off or to vibrate mode

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Marine Protected Areas Monitoring Enterprise

MPA Monitoring Enterprise

- Created in 2007 to lead planning of science-based, useful, and cost-effective MPA monitoring
- Currently housed within the California Ocean Science Trust
- Core elements:
  - Science
  - Information management
  - Communications

MPA Monitoring Enterprise

- What do we want to know and why?
  - Focus on meeting MLPA needs
- How can desired information be collected most efficiently?
- How can collected information be shared and presented most usefully?

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Overview & Project Framing

Morning Session

- Overview of planning process for NCC Monitoring Plan
- Key steps to develop a monitoring plan
- Overview of proposed framework structure
- Overview of planning methodology
- Goals of this workshop

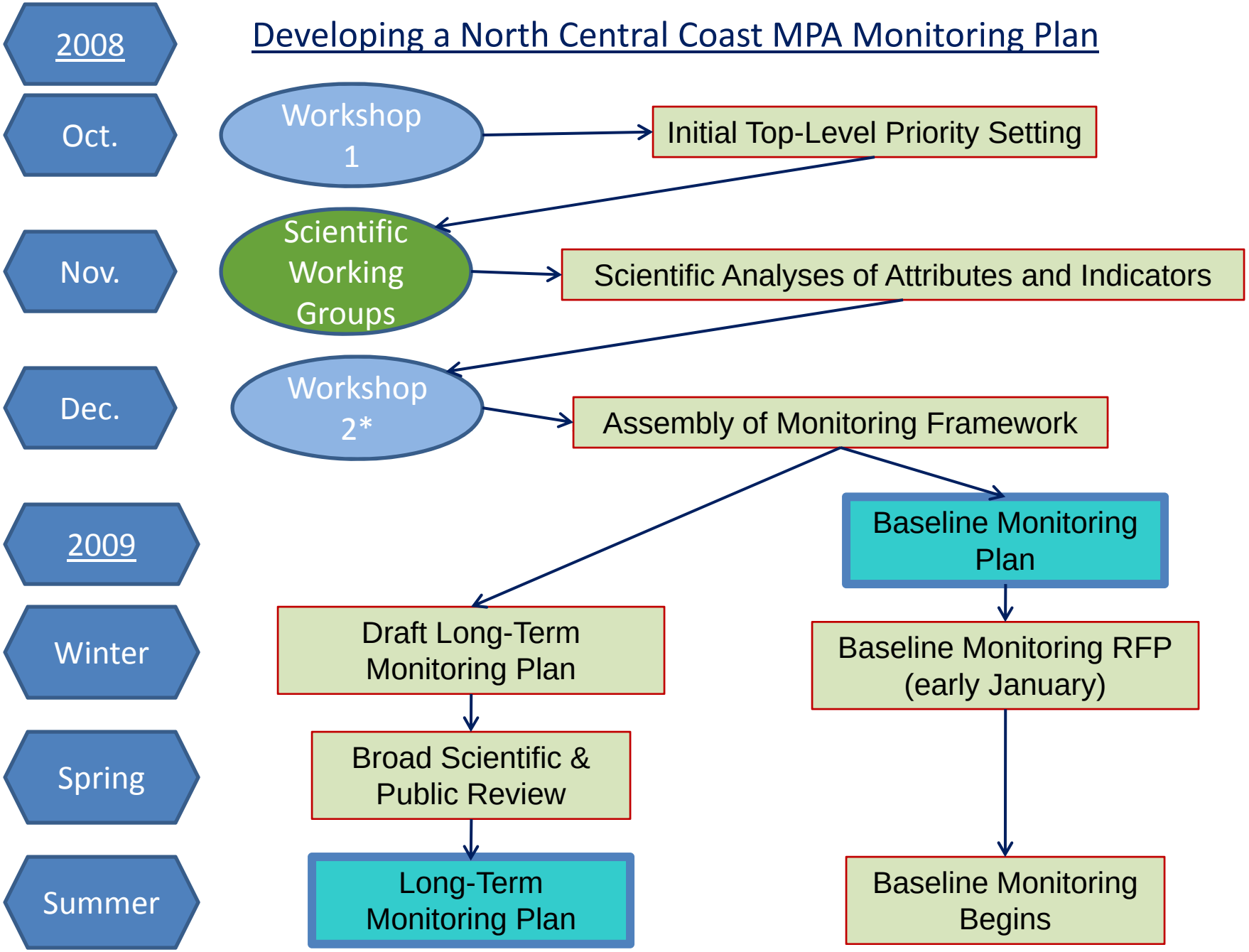
North Central Coast Monitoring Planning

- What is most important to monitor and why?
  - Meet MLPA requirements & integrate North Central Coast goals & objectives
  - Provide clear rationale for what will be monitored and why
  - Set clear monitoring priorities
  - Be feasible, useful, and cost-effective
  - Don’t reinvent the wheel

Considerations

- North Central Coast MPAs are scheduled to be implemented in 2009
- North Central Coast Baseline MPA monitoring should begin in Summer 2009
  - RFP release in early-mid January, 2009
- The OPC may allocate an additional $4M for baseline monitoring in each of the North Central, South & North Coast regions

Developing a North Central Coast MPA Monitoring Plan



** Note: Workshop 2 has been deferred until early 2009.*

Questions?

Morning Session

- Overview of planning process for NCC Monitoring Plan
- Key steps to develop a monitoring plan
- Overview of proposed framework
- Overview of planning methodology
- Goals of this workshop

Key Steps to Develop a Monitoring Plan

- Identify what you need to know
  - Audiences
  - Information Needs
- Identify what you should measure
  - Indicators
- Identify how this should be measured
  - Methods
  - Timing Frequency
  - Roles and Responsibilities

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Audiences

- Decision-makers
- Resource managers
- Stakeholders
- Scientists
- Public (educators, media, etc.)

…Everyone interested!

Information Needs: The Policy Context

MLPA & Master Plan

Under the MLPA & Master Plan, monitoring should:

- Evaluate the MPA network's performance relative to MLPA goals
- Facilitate adaptive management
- Improve understanding of marine systems
- Assess selected individual MPAs, regional MPA network components & the statewide network

The Policy Context: Providing Information

Regional Goals & Objectives and Site-Level Objectives

- Regional goals = MLPA goals
- Regional objectives are steps to achieve goals
- Site-level objectives are steps to collectively achieve regional objectives

Example Site-Level Objectives

1) Protect area of high benthic species diversity & maintain species diversity & abundance characteristic of north central coast region north of Point Reyes.
2) Monitor appropriate indicator species with focus on Nearshore & Deeper Nearshore Fishery Management Plan species.
3) Protect natural trophic structure & food webs, including pelagic finfish that serve as prey for other fish, marine birds & marine mammals.
4) Provide protection to area that contains one of most persistent & important upwelling plumes along entire California Coast & provides for significant down stream larval dispersal.
5) Help restore depleted species, such as near shore & deeper nearshore species.
6) Protect larval sources & enhance reproductive capacity of shelf species including rockfishes.
7) Protect area with diverse habitats & associated species including kelp forest ecosystems.
8) Protect natural heritage location while minimizing socioeconomic impacts to local communities.
9) Protect forage base for colonies of marine mammals & sea birds as well as protect colonies from disturbance.
10) Provide comparison analysis environment by providing SMR adjacent to SMCA across range of depths & fully accessible area within single reef complex in close proximity to Bodega Bay Marine Lab.
11) Protect area, when combined with adjacent SMCA, results in MPA "cluster" in preferred size range & functions as integral part of network/backbone of MPAs and is afforded measures of adaptive management, review & evaluation of management effectiveness.
12) Protect area that extends from intertidal out to state waters boundary across range of depths in very high level of protection.
13) Protect one of rare hard bottom reef complexes in NCCSR that extend from shore seaward to state water boundary.
14) Protect area of high abundance & natural diversity that, when combined with adjacent SMCA, is in preferred size range.

The Policy Context: Providing Information

Need a road map to apply objectives to monitoring

Monitoring Framework: Key Principles

- Focus on 2 questions:
  - ‘Why do we need to know this?’
  - ‘Can we feasibly do this?’
- Progressive setting & refining of priorities with rationales
- Focus on information most useful to management purposes
- Not reinventing the wheel
- Integration with policy context

Key Steps to Develop a Monitoring Plan

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- Identify how this should be measured
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Monitoring Framework: Key Components

Status & Trends Monitoring:

How is the system doing?

(e.g. status and change in kelp forest ecosystems)

Effectiveness Monitoring:

How are specific MPA design aspects or decisions actions affecting the system?

(e.g. effect of MPA size on kelp forest ecosystem integrity)

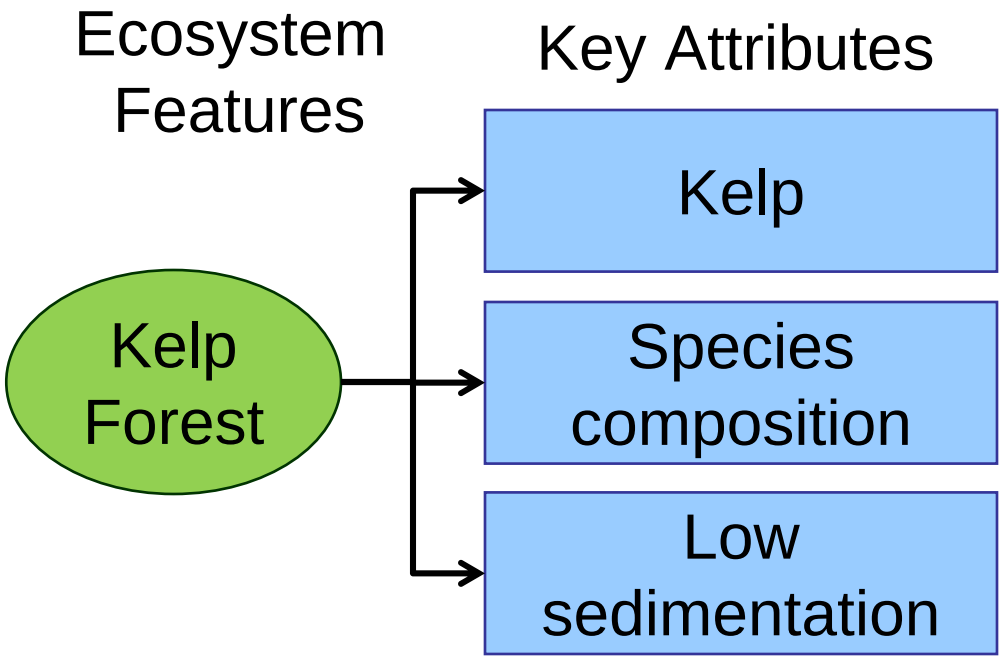
Monitoring Framework: Status & Trends Monitoring

Ecosystem Features

Ecosystem Features:

- 8-10 Ecosystem Features
- Key aspects of the marine ecosystem
- Collectively represent and encompass the marine ecosystem
- High-level framing of monitoring priorities

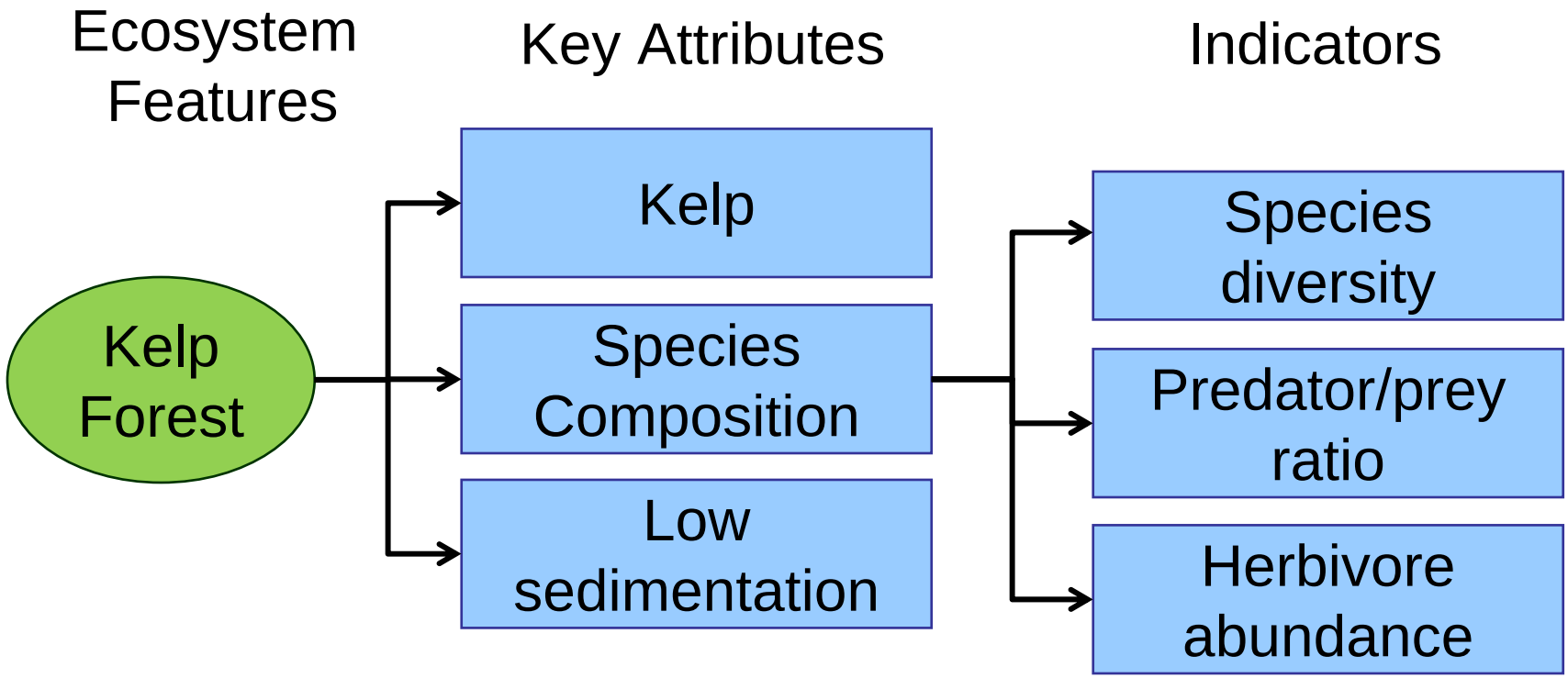
Monitoring Framework: Status & Trends Monitoring



Key Attributes:

- 3-5 Attributes for each ecosystem feature
- Key characteristics of the ecosystem feature required to sustain that feature

Monitoring Framework: Status & Trends Monitoring



Indicators:

- Measures of attribute and feature condition

Monitoring Framework: Key Components

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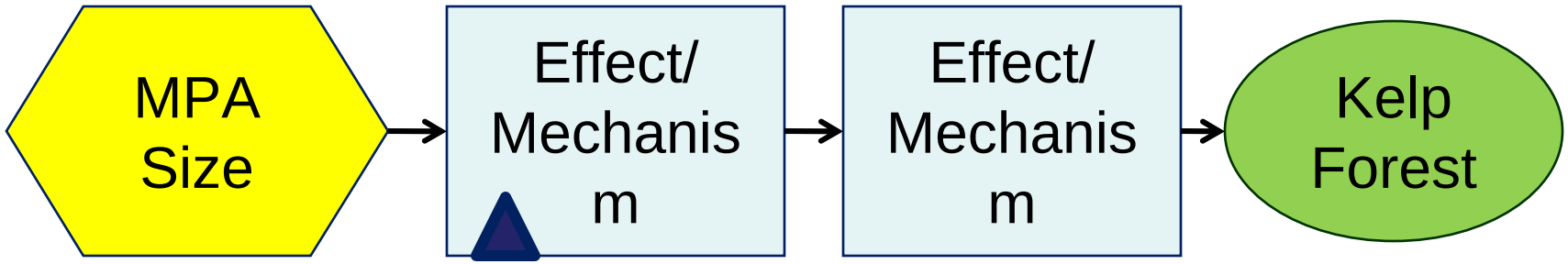
Effectiveness Monitoring:

How are specific MPA network design aspects or decisions affecting the system?

(e.g. effect of MPA size on kelp forest ecosystem integrity)

Monitoring Framework: Effectiveness Monitoring

What is the effect of MPA size on kelp forest habitat?



▲ = Approach/Method

Monitoring Framework: Development Process