

Marine Life Protection Act Initiative



Draft Proposal Evaluations North Central Coast Study Region

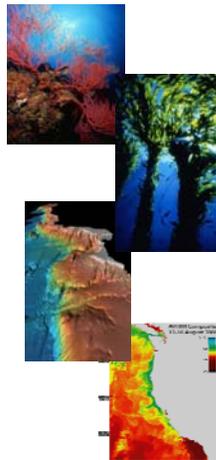
Presentation to the MLPA Science Advisory Team
January 23, 2008 • Pacifica, CA
Presented by Dr. Mark Carr

Master Plan Science Advisory Team

-  MLPA goals
-  Habitat representation
-  Habitat replication

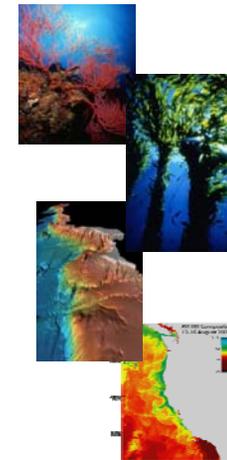
MLPA Goals - Habitats

1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as a **network**.



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Evaluation – Goals 1 and 4

Key Questions for Each Proposed Package

1. How well are key habitat types represented in proposed MPA packages?
2. What are the proposed levels of protection for these habitat types?
3. How well are habitats and levels of protection distributed across the study region?

SAT Guidelines - Goals 1 and 4

Linear estimate for shallow rock and sand habitats -- eliminates biases caused by unknown nearshore habitat

MPAs must extend out to 30m depth, not just to encompass the line

allows credit for mixed habitats (i.e. both rock and sand in same MPA)

SAT Guidelines - Goals 1 and 4

Level of Protection	MPA Types	Activities associated with this protection level
Very high	SMR	No take
High	SMCA	salmon (troll H&L in water greater than 50m depth), sardine, anchovy, and herring (pelagic seine)
Mod-high	SMCA	salmon (troll H&L in water less than 50m depth), Dungeness crab (traps/pots), squid (pelagic seine)
Moderate	SMCA SMP	salmon (non-troll H&L), abalone (diving), halibut, white seabass, shore-based finfish and flatfishes (H&L), clams (hand harvest), giant kelp (hand harvest)
Low-mod	SMCA SMP	Urchin (diving), lingcod, cabezon, greenling, rockfish, and other reef fish (H&L), surfperches (H&L)
Low	SMCA SMP	bull kelp and mussels (any method), all trawling, giant kelp (mechanical harvest)

Assigning protection levels to MPAs

Consider:

Allowed uses

Relationship between habitat and MPA boundaries

Prop. 4 has only a small area of <50m habitat open to salmon trolling → High Protection

Prop 2 has a large contiguous area of shallow rocky reef open to trolling → Mod-high Protection

Results: Habitat Representation

Similarities between proposals

- similarities in number and location of MPAs as well as the habitats they include
- size of MPAs varies
- clusters of MPAs with an inshore SMR and offshore SMCA that allows various fishing activities
- shoreline and shallow habitats are generally well represented in very high protection MPAs

Results: Habitat Representation

Similarities between proposals

- estuarine habitats are generally well represented in very high protection MPAs
- most proposals still protect a greater portion of these habitats in the south subregion (Drakes Estero)
- In contrast to the last round, most proposals target small estuaries in both north and south

Habitat Availability

Deep soft bottom is the most abundant habitat in all subregions

More rocky shore and shallow rocky reef in the north subregion

More shallow soft bottom in the south subregion

Kelp is only mapped in the north subregion

More estuarine area in the north, but more eelgrass in the south

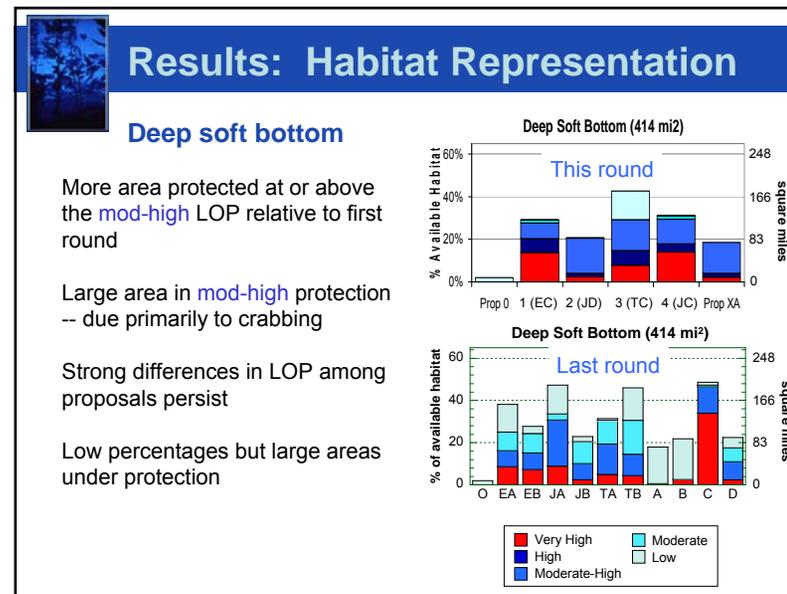
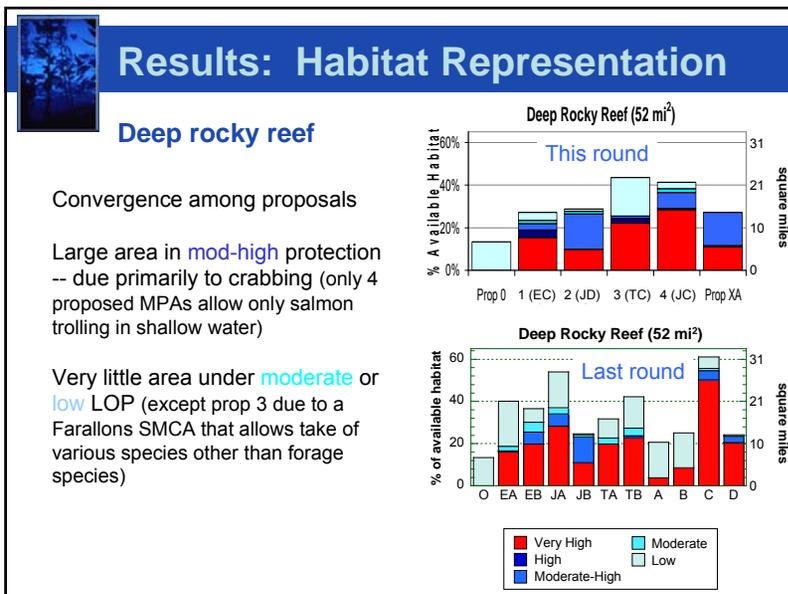
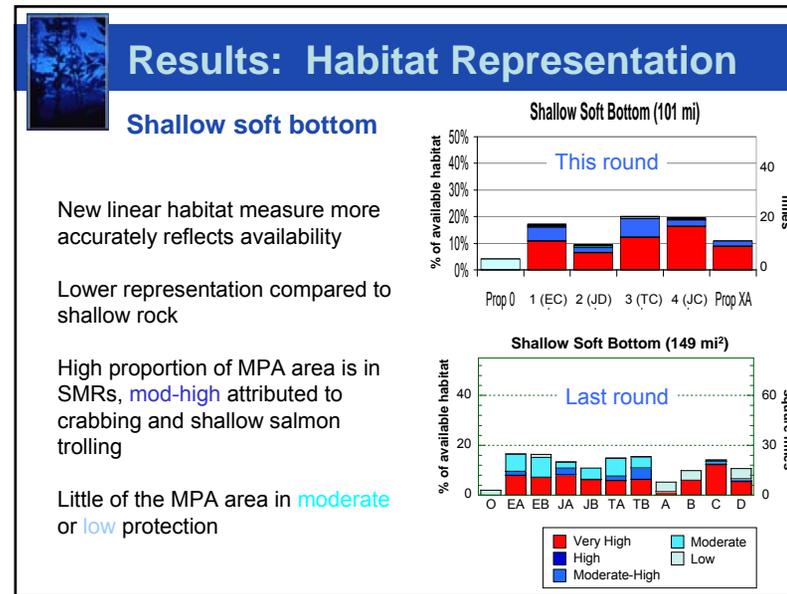
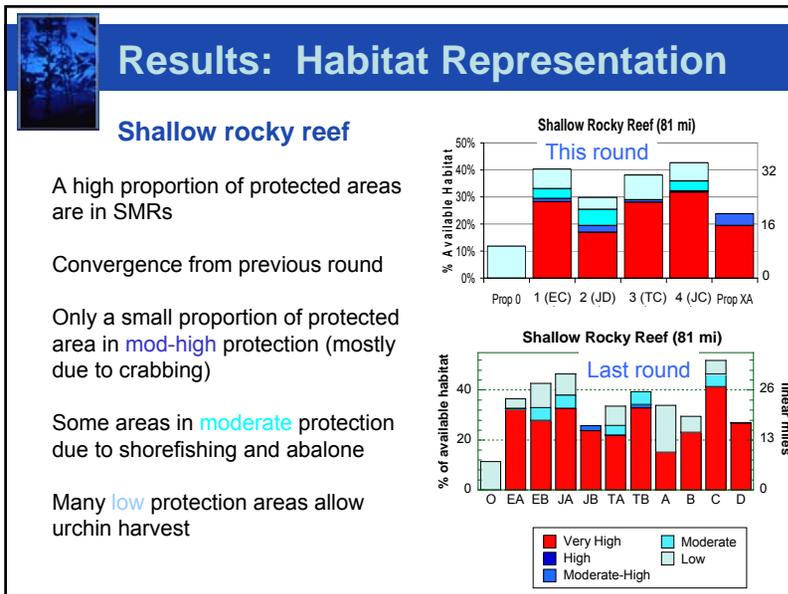
Results: Habitat Representation

Shoreline Habitats

Most proposals have at least 20% of rocky shore and surfgrass at very high protection, while allowing some shorefishing, abalone and urchin harvest.

Protection of sandy beach is generally lower than protection of rocky shoreline

Inclusion of **mod-high** protection affects sandy beach representation in 3 proposals (allow crabbing)



Results: Habitat Representation

Summary

- Overall convergence among proposals in second round
- Many habitats are well represented in high levels of protection.
- Habitats varied markedly in allowed uses and the relative representation of levels of protection.
- Shallow sand habitat still not as well represented as shallow rock

Methods: Habitat Replication

Guidelines for replication:

- MPA or cluster must meet the minimum size guidelines (9 square miles)
- Habitat must meet the threshold identified to encompass 90% of biodiversity in that habitat type
- Estuarine MPAs do not have to meet size guidelines but must contain at least 0.12 mi² of estuarine habitat
- Some small estuaries (Gualala and Garcia rivers, Pescadero Creek) contain less than the minimum 0.12 mi², but protection of these habitats still has conservation value

Results: Habitat Replication

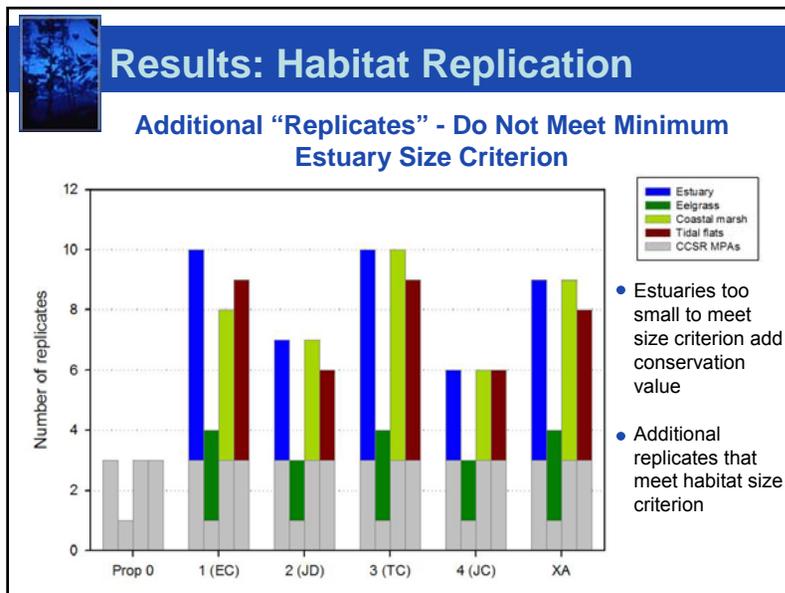
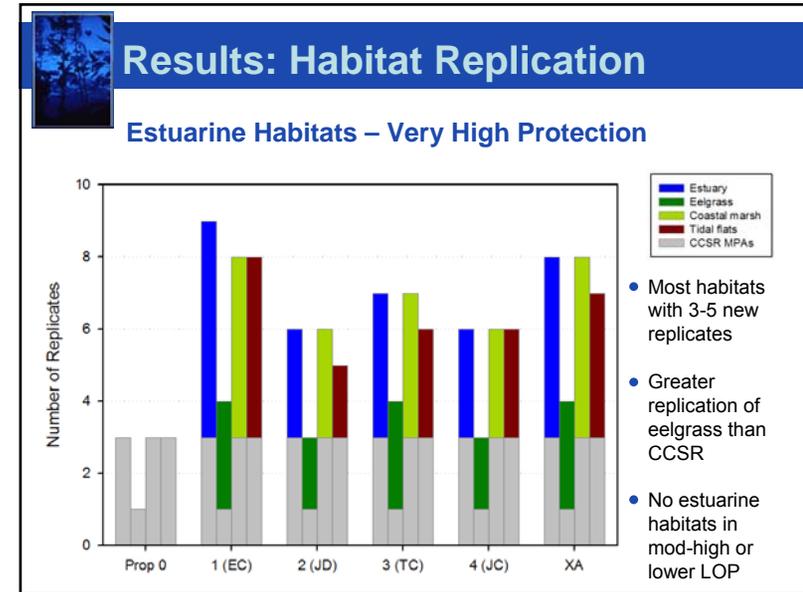
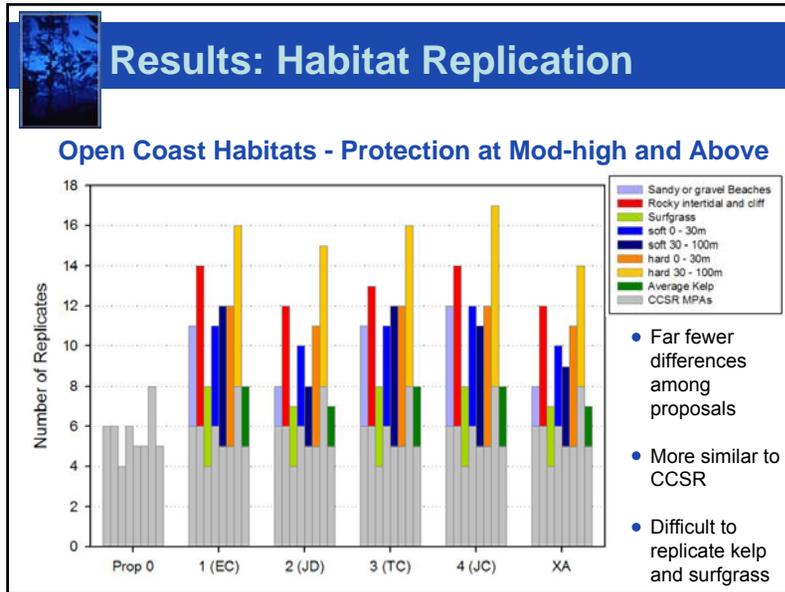
Open Coast Habitats – Very High Protection

- Two proposals have no replication at this LOP
- Generally less than CCSR
- Difficult to replicate kelp and surfgrass

Results: Habitat Replication

Open Coast Habitats - Protection at High and Above

- Marked differences among proposals
- Generally less than CCSR
- Difficult to replicate kelp and surfgrass



- ### Results: Habitat Replication
- #### Summary
- Marked differences among proposals
 - Generally less replication than CCSR at highest levels of protection
 - Fewer differences among proposals and more similar to CCSR at moderate-high levels of protection
 - Estuarine habitats well replicated.