

**California Marine Life Protection Act Initiative**  
**Master Plan Science Advisory Team**  
**Executive Summary – SAT Central Coast MPA Proposal Evaluations**  
*January 26, 2006*

The MLPA Master Plan Science Advisory Team (SAT) analyzed the relative merits of the five proposed MPA packages (0, 1, 2, 3, AC) in meeting the SAT guidelines and science-related MLPA goals (goals 1, 2, 3, 4 and 6). Those analyses were discussed, refined and approved by members of the SAT present at the January 20, 2006 meeting in San Jose.

Subsequent to that meeting, a draft executive summary was prepared by several SAT members. Three iterations, resulting in this executive summary, were circulated by email to all SAT members. A majority of the SAT members expressed support for the resulting document. One SAT member expressed concerns about the use of area covered in the size and spacing analysis and diminished credit given to “low protection” state marine conservation areas and chooses not to support the executive summary. The remaining SAT members who have not yet expressed a judgment on the executive summary will be contacted by telephone.

<b>MLPA Goal</b>	<b>SAT Evaluation of Scientific Elements</b>
1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.	Habitats and protection levels
2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.	Size, spacing and protection levels
3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subjected to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.	Habitat replication
4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California.	Habitats and protection levels
5. To ensure that California’s MPAs have clearly defined objectives, effective management measures and adequate enforcement and are based on sound scientific guidelines.	No SAT evaluation specific to Goal 5
6. To ensure that the states’ MPAs are designed and managed, to the extent possible, as a network.	Size and spacing guidelines

Based on these analyses, a number of conclusions were drawn.

**General Comments on All Packages**

1. All four proposed MPA packages (1, 2, 3, AC) increase conservation value over the existing MPAs (Package 0).

2. However, the packages differ with respect to how well various habitats are protected across the study region, and thus how well they achieve the conservation **goals (1, 2, 3, 4 and 6)** of the MLPA.
3. With respect to **goals 1 and 4**, all four new proposed MPA packages provide similar amounts of high protection (SMR or SMCA High) for the nearshore shallow habitats such as estuarine (30-55%), sandy beaches (17-26%), rocky intertidal (25-34%), and kelp (15-30%) throughout the study region.
4. Across the entire study region, all four new proposed packages provide similar amounts (19-38%) of moderate to high protection of deep sand habitats throughout the study region.
5. Shallow sand is the most common benthic habitat in the study region. All packages provide moderate to high protection for greater than 7% of shallow sand habitats.
6. With respect to **Goal 3**, all the packages meet the requirement for habitat replication with the exception of deep water habitats.
7. The SAT is analyzing the effects of the spacing of MPAs in each package with respect to population sustainability.
8. With respect to **Goal 6**, in all new MPA packages, most of the proposed MPAs are close to or exceed the minimum size recommended in the SAT guidelines for shoreline length. The packages differ significantly, however, in meeting the SAT guidelines relevant to MPA area. The size and spacing of MPAs are not independent. MPAs smaller than the guidelines would need to be contiguous to function the same as a larger MPA. Similarly, for connectivity purposes, smaller MPAs need to be placed closer together than larger MPAs.

### **Differences Among Packages**

9. Although there are many similarities among the four new packages, the levels of protection, the amount of habitat, the numbers of habitat types protected, the area of individual MPAs, and the spacing of MPAs varied across packages.
10. Across the study region, packages 2, 3 and AC better met the requirements of **Goal 4**, pertaining to representation of all habitats, than did package 1.
11. The large differences among the proposed packages pertain to protection of rock habitats.
  - a) With respect to **Goal 1**, Shallow rock habitats are critical for many of the species that will likely benefit from MPAs (e.g., rockfishes). Across the entire study region, packages 2, 3 and AC provide moderate to high protection to 28-38% of shallow rock habitats, whereas Package 1 protects less than 12% of this habitat.
  - b) The amount of shallow rock habitat having high protection varies widely among packages in the central and southern portions of the study region. Specifically, in the central part of the region, packages 2, 3 and AC include >30% of this habitat in high protection, while Package 1 includes greater than 10% of the habitat in high protection. In the southern portion, packages 1 and 3 include 5-15% in high protection, while packages 2 and AC each protect >30% of this habitat at the high or moderate level.

- c) With respect to **Goal 1**, deep rock habitats are also critical for many of the species that will likely benefit from MPAs. Across the entire study region, packages 2, 3 and AC provide moderate to high protection to 35-40% of deep rock habitat, and Package 1 provides moderate to high protection to 12% of this habitat.
  - d) In general, packages 2, 3 and AC protect similar amounts of habitats at moderate to high protection levels. Package 1 could provide protection levels that are more similar to the other packages by making alterations in the proposed allowable activities and MPA boundaries. One exception to this is the limited protection afforded by Package 1 to shallow rock habitat in the southern-most part of the study region. In that area, proponents would need to relocate proposed MPAs to include more shallow rock habitat.
12. Related to **Goal 6**, packages 2, 3 and AC better met the SAT guidelines for MPA area. When contiguous MPAs are considered as a single larger MPA, two-thirds of the MPAs in Package 1 are smaller than SAT guidelines, while more than half of all MPAs meet or exceed SAT minimum guidelines in packages 2, 3 and AC.
  13. The discrepancy between packages in meeting SAT guidelines for area is even more extreme when considering MPAs with a high level of protection. More than 80% of Package 1 MPAs with high protection fall below the minimum SAT guidelines. More than half of the MPA clusters with high protection in packages 2, 3 and AC meet or exceed the minimum SAT guidelines.
  14. Each package proposes many small MPAs in the Monterey Peninsula. Most of these by themselves do not meet the SAT size guidelines. As a group, they may serve the same function as a larger MPA, although the level of protection varies greatly among the small MPAs.
  15. SAT spacing guidelines tend to be well met across the study region in all proposed packages for some habitats (sandy beaches, rocky intertidal, kelp forest, shallow sand).
  16. For other habitats (shallow rock [0 – 30m, 30 – 100m], upwelling centers, deep sand, surfgrass/eelgrass), Packages 2, 3, and AC better met the SAT guidelines for MPA spacing than Package 1. Package 2 largely meets the SAT spacing guidelines for all habitats where it is possible to meet the guidelines. Packages 3 and AC had gaps between MPAs that exceed SAT guidelines in only 2 habitats. Package 1 had gaps that exceed SAT guidelines in half of the ten habitats analyzed.

### **Commercial and Recreational Fisheries**

Each package was also analyzed for impacts on 19 commercial fisheries and 2 important recreational fisheries (salmon and rockfish). There are several patterns that emerge from the analysis of the four MPA packages:

17. All packages affect the 19 commercial fisheries differently, with the smallest effects in terms of both stated importance and area affected evidenced in Package 1 among fisheries represented on the stakeholder group.
18. In the commercial fishery, for 14 out of the 19 species investigated, Package 1 has the least effects on area and Package AC the most, and Package 3 lies between 1 and 2.

19. There are some deviations from this pattern in terms of the relative stated importance of the affected areas, i.e., larger areas affected do not always correspond to higher stated importance.
20. Packages have different effects on the two recreational fisheries considered, with the package that affects the smallest area of grounds not necessarily being the one that affects the least number of trips.
21. While Package 1 impacts the least amount of recreational fishing area for both salmon and rockfish, it impacts only the second smallest number of trips for both, with Package AC having larger area effects but smaller effects on trip numbers.