# MLPA - SAT
# Summary
# of
# Goals 1 and 4

**(Packages: February 2006 versions)**

**Presented to the**
**MLPA Blue Ribbon Task Force**

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# Overview

**Goal 1.** To protect the natural **diversity** and abundance of marine life, and the structure, function, and integrity of marine **ecosystems**.

**Goal 4.** To protect marine natural heritage, including protection of **representative and unique marine life habitats** in California.

How well do proposed MPA packages meet the goals and associated SAT guidelines?

What are the similarities and differences among the packages?

# Overview

**Elements of analysis:**

1. **How well are key habitat types represented in the proposed MPA packages?**

2. **How well are representative habitats distributed across the Study Region?**

3. **What are the proposed levels of protection to these ecosystems?**
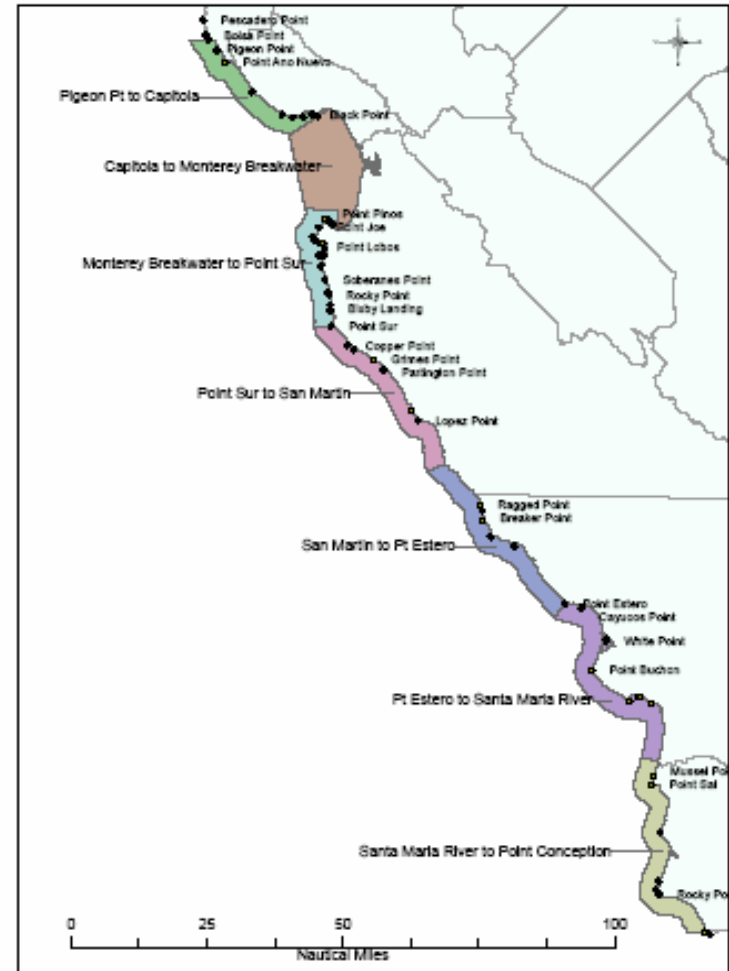
For each package and among packages

# General Approach

**Identify protection level of each MPA by proposed levels of allowable "take"**

- SMP
- SMCA Low
- SMCA Mod
- SMCA High
- SMR

**Determine habitat representation across entire Central Coast Study Region**

MLPA Central Coast Study Area by Region

# General Comments on All Packages

**All five MPA packages (1, 2, 3, S, and AC) increase ecosystem protection over existing MPAs.**

**Packages differ with respect to how well various habitats are protected across the study region, and thus how well they achieve goals 1 and 4 of the MLPA.**

# Similarities Among Packages

All five proposed MPA packages provide similar amounts of protection for the nearshore shallow habitats **estuaries**, **sandy beaches**, and **rocky intertidal**, across the entire study region.

□ SMP
□ SMCA Low
□ SMCA Mod
■ SMCA High
■ SMR
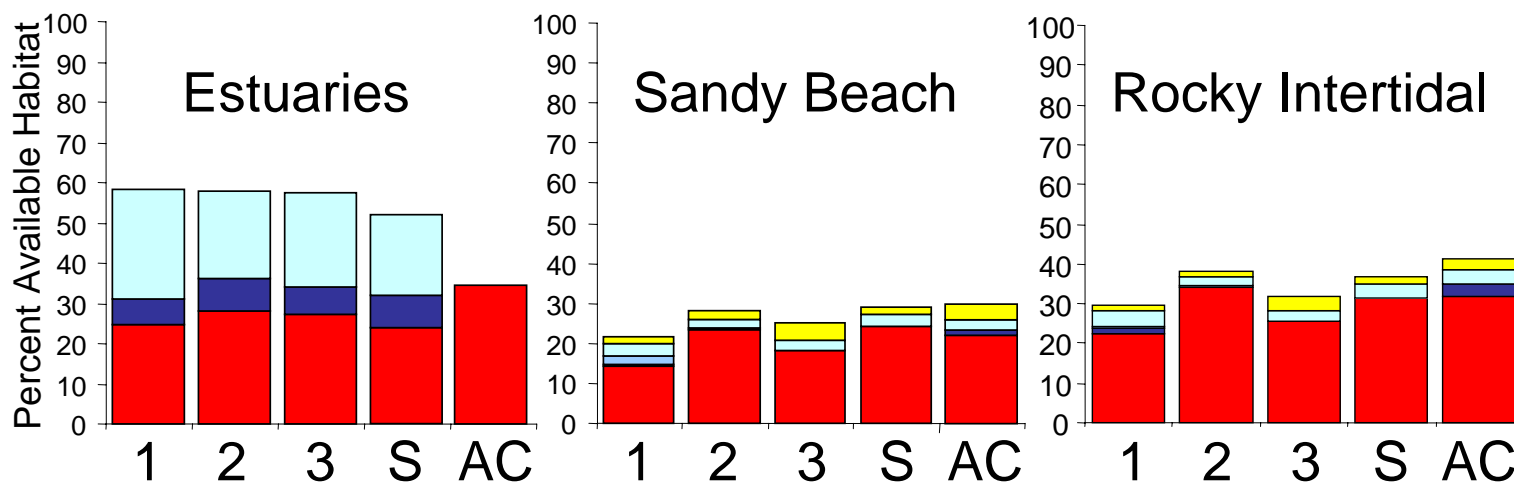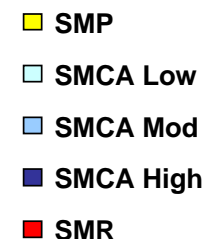
# Similarities Among Packages

**Shallow sand** (<100 m water depth) is the most common habitat in the study region (72%).

All packages provide at least moderate protection to greater than 10% of shallow sand habitat (88 sq. mi.). High protection is afforded to at least 61 sq. mi.

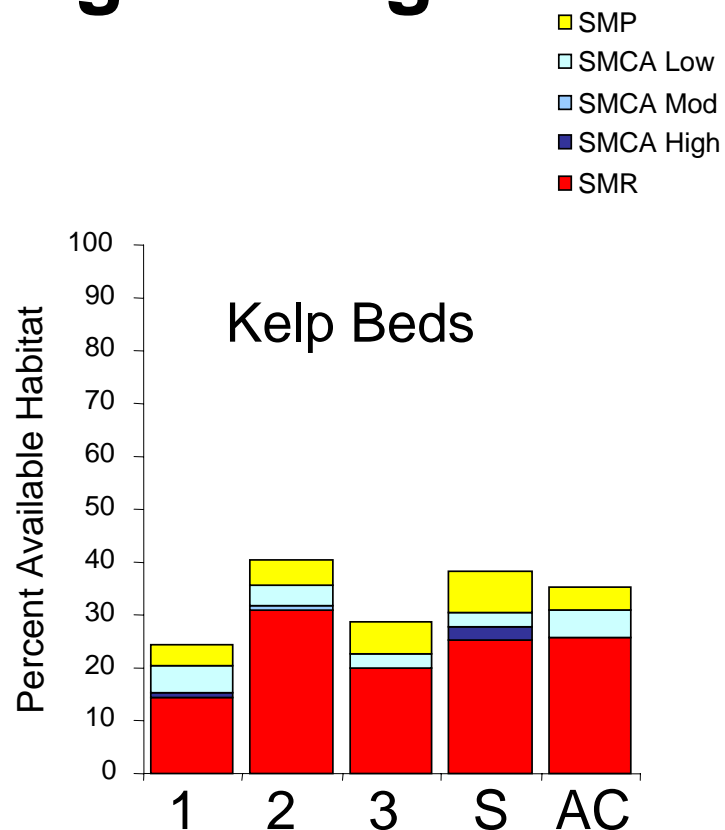Across the entire study region, all packages provide moderate-to-high protection to 18-34% **deep sand** habitat.
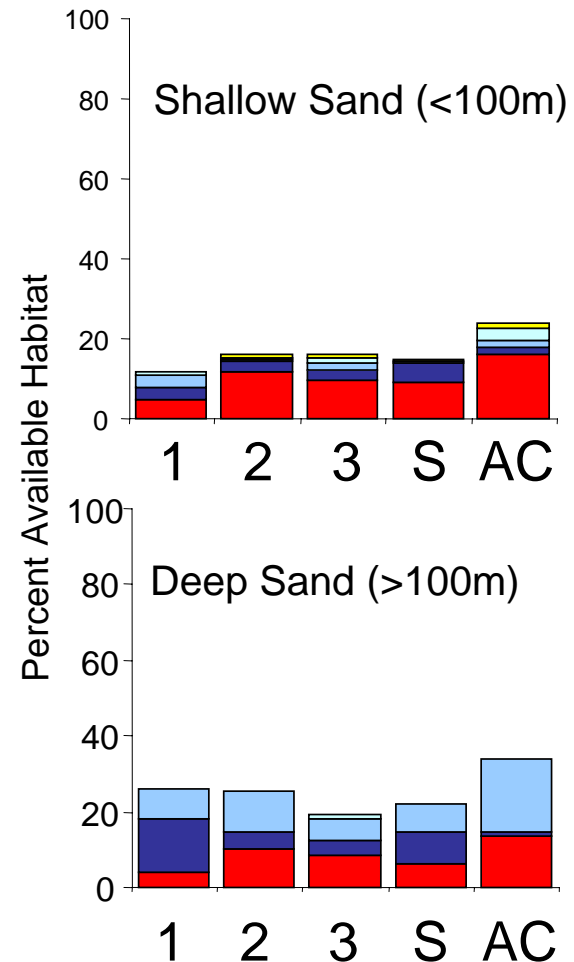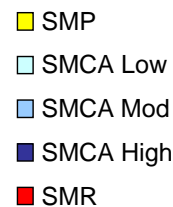
# Differences Among Packages

Across the entire study region at the highest level (SMR) of protection:

Packages 2 protects 31%
AC and S protect 25%
3 protects 20%, and
1 protects 15%.

This pattern generally applies at the subregion level as well.

**Legend:**
- SMP
- SMCA Low
- SMCA Mod
- SMCA High
- SMR

**Kelp Beds**

Percent Available Habitat

(Bar chart with y-axis from 0 to 100, x-axis categories: 1, 2, 3, S, AC)

# Differences Among Packages

Across the entire study region, packages 2, 3, S, and AC provide moderate-to-high protection to 25-32% of **shallow rock** habitats, respectively, whereas Package 1 protects 15% of this habitat.
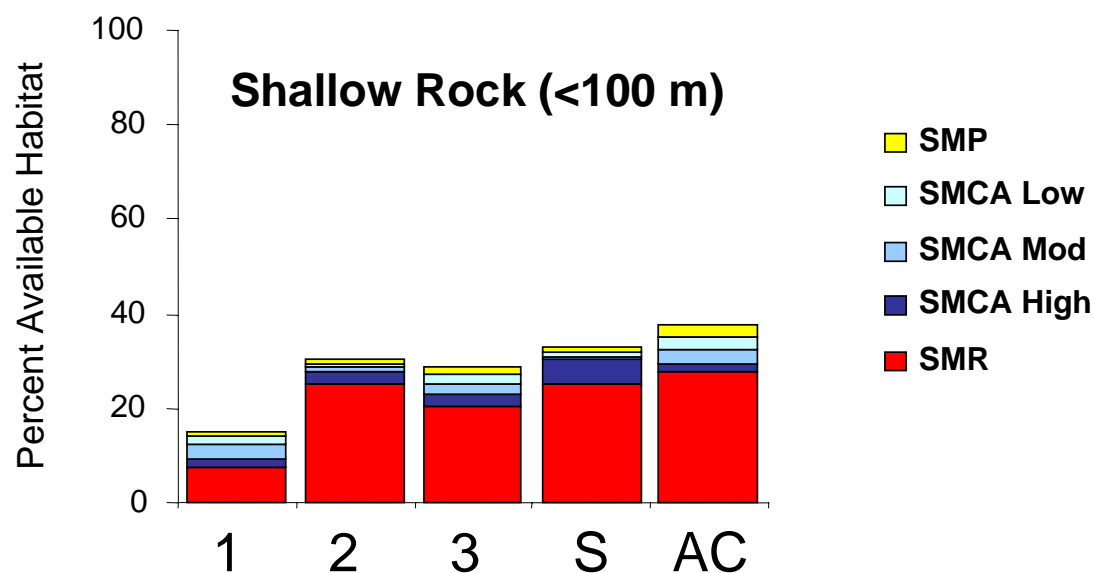
# Differences Among Packages

Across the entire study region, all packages provide similar amounts of moderate-to-high protection of **deep rock habitat**.

However, packages 1,3, and S protect <3% of this habitat type at the highest level (SMR) throughout the study region.
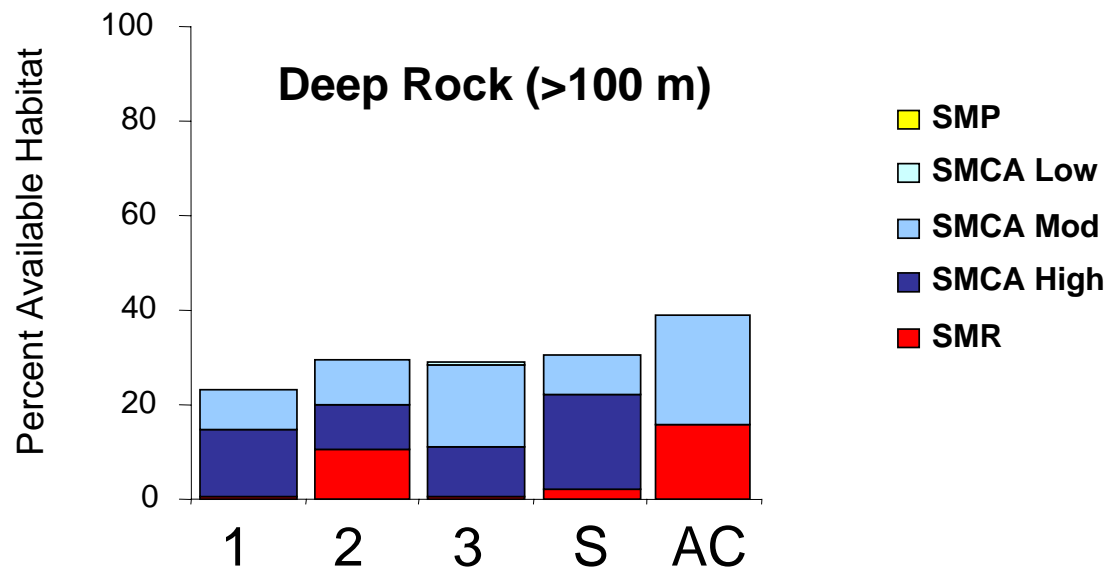
**Shallow (0-100 m) and deep (>100m) canyon habitats**

Occur in three key locations:
Monterey Bay
Carmel Bay
Southern Big Sur
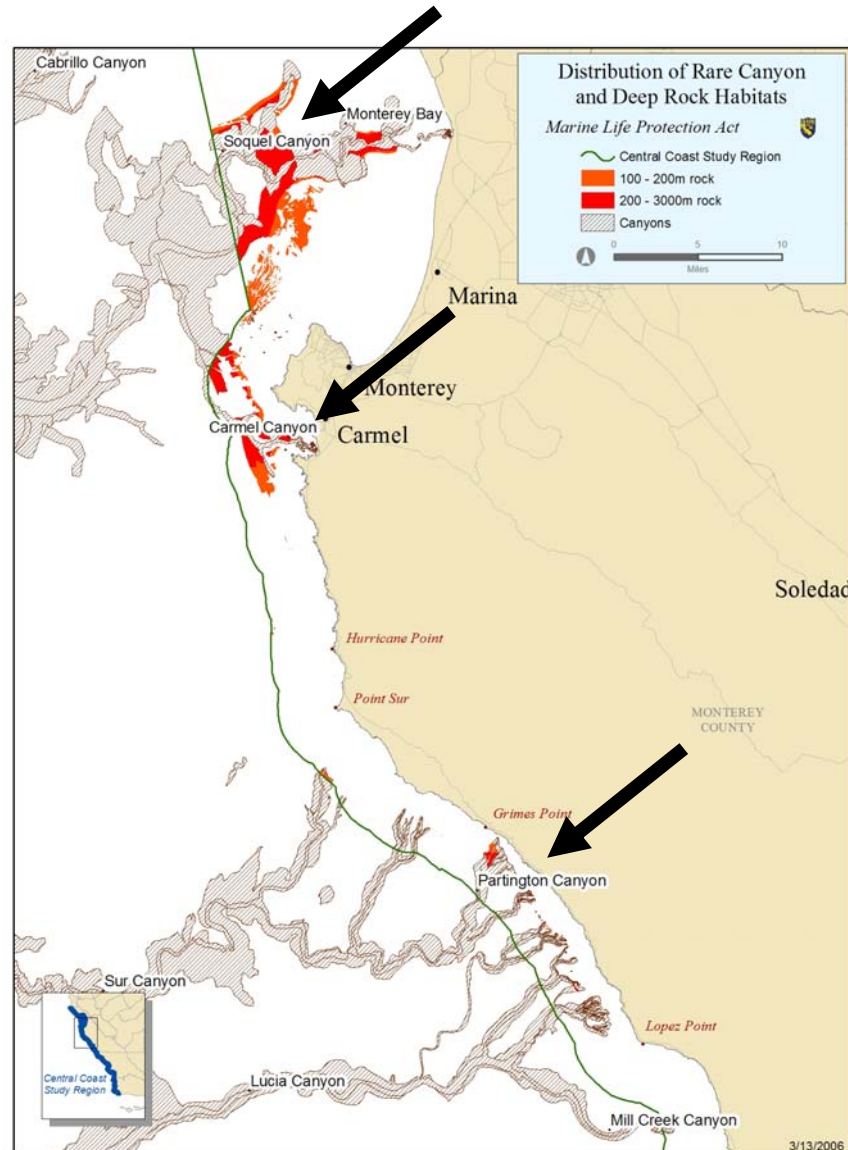
# Differences Among Packages

Across the entire study region, packages provide different amounts of moderate-to-high protection of **shallow canyon** (4-37%) and **deep canyon** (19-37%).

Across the three subregions, package AC protects the highest amount of **shallow canyon** habitat; package 1 protects the least amount.

Packages 1 protects the greatest amount of **deep canyon** habitat at **SMCA-high** level of protection, but the least at the **SMR** protection level.
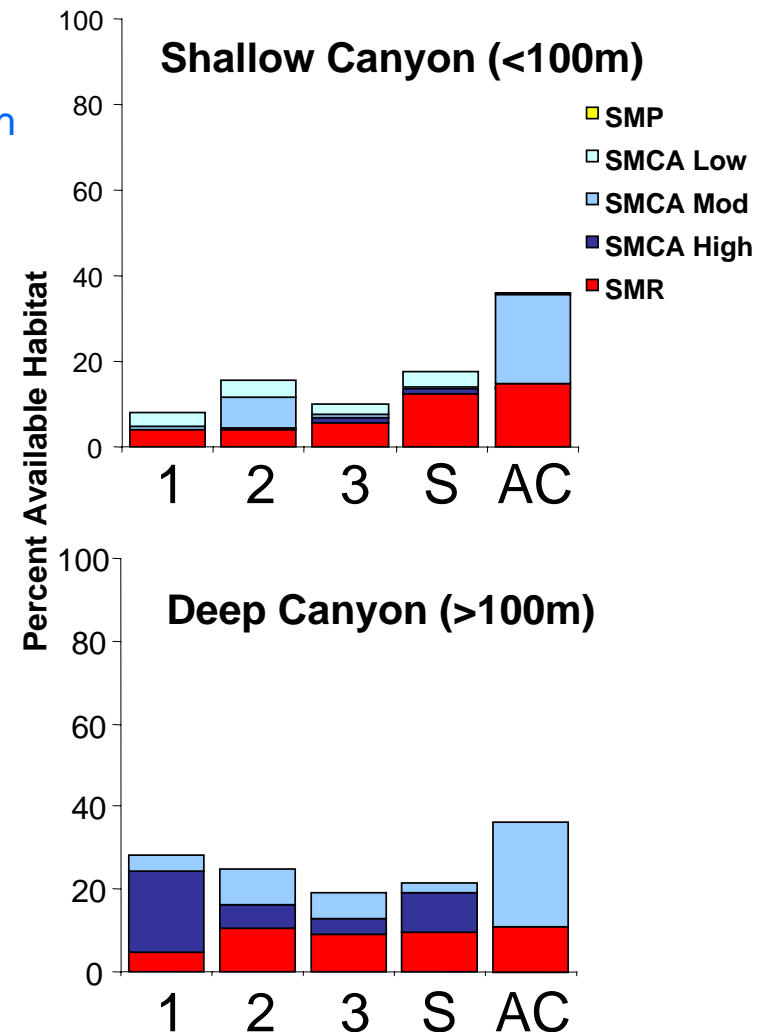
# Guidance for Amount of Habitat Needed to Meet MLPA Goals 1 and 4

The **minimum** size guideline (3 miles long) combined with the minimum spacing guideline (30 miles apart) suggests that MPAs should cover at least **9%** of each habitat in the study area (i.e., 3 mi/33 mi).

The **maximum** of the preferred size guideline (12 miles) combined with the lower value of the maximum spacing guideline (30 miles) suggests that MPAs covering up to **29%** of each habitat in the study area bound the preferred range of SAT guidelines (i.e., 12 mi/42 mi).

**At least 10%** of each habitat type is represented at the moderate-to-high protection levels by all packages.

There are some exceptions within each subregion that contribute to spacing shortfalls and habitat representation across the study region.

**At least 20%** of five habitats; deep rock, deep sand, deep canyon, rocky intertidal and estuaries are protected by **all packages** at the moderate-to-high level.

Shallow rock habitat is much less represented in package 1.

Kelp, especially in southern portion of study area, is less represented by package 1.

Whereas, kelp habitat is represented across much of the Study Area by packages 2 and S.

When **at least 30%** of the available habitat is protected at moderate-to-high protection levels, packages 2, AC, and S represent more habitat types than packages 1 and 3.

| Package | Protection level | Number of Habitats (max = 10) Represented by at Least | | |
| --- | --- | --- | --- | --- |
| | | **10%** | **20%** | **30%** |
| **1** | moderate-to-high: | | 5 | 2 |
| | high-level: | | 4 | 1 |
| **2** | moderate-to-high: | | 8 | 5 |
| | high-level: | | 6 | 4 |
| **3** | moderate-to-high: | | 8 | 2 |
| | high-level: | | 5 | 1 |
| **S** | moderate-to-high: | | 8 | 4 |
| | high-level: | | 7 | 2 |
| **AC** | moderate-to-high: | | 10 | 7 |
| | high-level: | | 6 | 4 |

# Disregard existing kelp leases

# Consider existing kelp leases