

WHITE PAPER

MARINE RESERVES: OBJECTIVES, RATIONALES, FISHERY MANAGEMENT IMPLICATIONS AND REGULATORY REQUIREMENTS

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**Scientific and Statistical Committee
Pacific Fishery Management Council**

COMMONLY CITED MARINE RESERVE BENEFITS

- **Provide “insurance policy” against environmental variability and errors & uncertainty in fishery management**
- **Provide fishery benefits**
- **Provide ecosystem benefits (including habitat protection)**
- **Address social issues (e.g., reduce social conflict, protect unique cultural areas)**
- **Provide opportunities to advance scientific knowledge**

PURPOSES OF WHITE PAPER

- **Describe rationale & scientific basis for claims regarding marine reserve benefits**
- **Discuss implications of reserves for fishery management**
- **Establish SSC guidelines and standards for technical content of reserve proposals within Council's area of jurisdiction**

ARE RESERVES POTENTIALLY USEFUL TOOLS FOR ACHIEVING THE FOLLOWING OBJECTIVES?

OBJECTIVE		RELEVANT ISSUES
Reduce uncertainty in fishery mgmt	+	Complete age structure ☆ enhance population persistence.
Provide fishery benefits (yield)	-	Theoretical models, empirical studies not sufficiently compelling. Yield not necessarily same as benefits.
Provide ecosystem benefits	+	Assuming effects of effort displacement effectively managed.
Address social issues (allocation)	+	Non-scientific criteria for evaluating achievement of objective.
Provide research opportunities	+	Expectations & conclusions commensurate with technical merits.

GUIDELINES FOR REGULATORY ANALYSIS

- **Apply to no-take reserves as well as partial closures**
- **Based on Federal regulatory requirements (NEPA, RFA, EO 12866, other applicable law)**
- **Same standards as used for non-reserve proposals**

ELEMENTS OF REGULATORY ANALYSIS

- Specify management objective.
- Describe management context and affected environment.
- Identify problem, role of reserves in addressing problem.
- Define status quo.
- Define reasonable range of alternatives to status quo.
- Analyze alternatives – biological, socioeconomic, ecological effects; monitoring, enforcement requirements.
- Document public process.

CONCLUSIONS & RECOMMENDATIONS

- **Management objective is starting point.**
- **Ensure substantive role for regulatory analysis.**
- **Distinguish between science & policy.**
- **Recognize uncertainty, strengths & weaknesses of all management alternatives.**
- **Coordination & proactive Council involvement needed.**

RESEARCH & DATA NEEDS

- **Spatially explicit data and models**
- **Implications for stock assessments**
- **Fishery yield: spatial & temporal scale of species-specific effects**