
*Using Socioeconomic Information in the
Design of Marine Protected Areas
Under the Marine Life Protection Act:
Critiques, Decisions and Options*

A Report to the
California Fish and Game Commission



December 7, 2006

Prepared by:



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Executive Summary

The California Fish and Game Commission (Commission) has an opportunity to address the role of socioeconomics as part of preparations for initiating the next Marine Life Protection Act (MLPA) study region. The MLPA Blue Ribbon Task Force (BRTF) recommended this step as part of its “lessons learned” memorandum after completing the initial study region along the central coast. Two external evaluation reports made similar recommendations. This report is designed to assist the Commission by presenting (1) a review of key issues related to socioeconomics, and (2) a set of decisions and options to address those issues. Attachment A to the report is a list of all socioeconomic information developed for the MLPA Central Coast Project, organized in table format to show availability at different points.

The MLPA Initiative’s approach to socioeconomics

The MLPA Initiative (Initiative) developed a working approach to the role of socioeconomics in the design of marine protected area (MPA) network components over the course of the Central Coast Project. This approach was influenced by a specific interpretation of the MLPA and factors such as availability of information, project deadlines, and budget. The Central Coast Project approach is summarized in a memorandum to the BRTF from Initiative staff entitled “Socioeconomic Considerations in Developing Alternative Network Components for a Network of Marine Protected Areas Along the Central Coast,” dated January 13, 2006 (Attachment B to this report). Key points include:

- The MLPA “gives precedence to ecosystem integrity and habitat protection goals” in designing a network of MPAs
- The statute’s limited references to socioeconomic or economic factors justify a lower priority for MPA decision making
- The MLPA anticipates decision making based on readily available, up-to-date science and provides no suggestion of deferring action for additional data collection or analysis
- MLPA Central Coast Regional Stakeholder Group members had substantial personal knowledge of socioeconomic consequences of the MPAs they considered and that knowledge was supplemented by their outreach to constituencies and public comment
- “It is not possible” to develop monetary measures for valued uses other than commercial fishing at the spatial resolution necessary for MPA design [based on data collected for the Central Coast Project]
- Additional information on human uses of central coast ocean resources was developed with priority given to data with sufficient spatial detail to be useful in the design and evaluation of proposed MPA network components, and
- The socioeconomic data developed by the Initiative, augmented with California Department of Fish and Game (Department) and public source data, would be sufficient to complete the California Environmental Quality Act (CEQA) and California Administrative Procedures Act (CAPA) analyses

A review of information available for different phases of the Initiative's Central Coast Project indicates the following:

- (1) For the MLPA Central Coast Regional Stakeholder Group (CCRSG) phase:
 - The CCRSG received extensive biophysical information
 - The CCRSG appears to have had the same *descriptive* information about socioeconomic activity in the study region as decision makers later in the process
 - The CCRSG received limited statistical information about human activity and its economic value in the study region. Commercial fisheries information was significantly more abundant and detailed than information for other consumptive uses, or for non-consumptive uses.
 - The CCRSG had very limited formal information *evaluating* potential socioeconomic impacts to use in designing MPA network component alternatives, and this only addressed fisheries.
 - The CCRSG benefited from significant personal knowledge of stakeholders and other interested parties, and used this information in designing MPA packages.
- (2) For the BRTF decision phase, the BRTF benefited from additional impact evaluation information, again focused on commercial fisheries and two recreational skiff fisheries (salmon and rockfish).
- (3) The Department and Commission had more *evaluation* information about potential socioeconomic impacts than the BRTF or CCRSG. This information was limited to the same consumptive uses: most commercial fisheries and two recreational fisheries. The Commission did not have additional information describing the range of activity in the study region.
- (4) The Initiative did not develop, for any phase, estimates of the direct economic value of non-consumptive activity in the study region. The Initiative also did not develop, for any activity, estimates of secondary value or impacts, and did not develop an estimate of the "existence" value associated with MPAs.

This report presents four basic critiques of the Initiative's approach to socioeconomics that cover:

- (1) Its interpretation of the MLPA,
- (2) The types of socioeconomic information developed for MPA network component design and evaluation overall,
- (3) The availability of information to the CCRSG, and
- (4) The lack of a basic analytical framework for socioeconomics.

Each of these critiques is explored in the report, with attention to multiple perspectives. For each critique the report inquires whether a different approach would have made a significant difference in the design of MPA network components, including the Commission's decision.

There are three basic decisions facing the Commission about the role of socioeconomics in the next study region. These are:

- (1) Whether to address the lack of an authoritative interpretation of the MLPA's requirements regarding socioeconomic information;
- (2) Whether to develop Commission guidance on socioeconomic products, such as a full description of human activity, consumptive and non-consumptive; and
- (3) In light of "lessons learned" recommendations, the best way for the Commission to interact with other entities such as the BRTF in defining an approach to socioeconomics for the next study region.

For each of the three decisions, this report presents three basic policy options. Each of the options is evaluated against four criteria specified in the scope of work for this report:

- (1) Legal requirements of the MLPA, CEQA, and CAPA regarding socioeconomics,
- (2) Usefulness to the Commission in making decisions regarding designation of MPAs,
- (3) Usefulness to stakeholders in developing proposed packages of MPAs, and
- (4) Availability in a timely and cost-effective manner.

This report does not recommend one option over another.

Purpose for this Report

The purpose for this report is to assist the California Fish and Game Commission (Commission) in developing socioeconomic policy guidance for the next Marine Life Protection Act (MLPA) study region in response to recommendations from multiple “lessons learned” reports. Guidance from the Commission would be intended to improve decision making and resource allocation in the next MLPA study region, and reduce the potential for conflict and confusion among stakeholders, decision makers, and the public related to socioeconomic issues.

The MLPA Initiative

In 1999 California enacted the MLPA¹ as one more step in a decades-long effort to protect ocean resources and support marine user groups. The MLPA directs the California Department of Fish and Game (Department) and Commission to re-examine and re-design the state’s system of marine protected areas (MPAs), in order to increase the system’s coherence and its effectiveness at protecting marine life, habitat, and ecosystems. The Commission has statutory responsibility for adopting a Marine Life Protection Program to implement the MLPA and a master plan to guide implementation. The Department is the primary implementing agency.

The state experienced challenges in its first two efforts to implement the statute. Its third effort, the MLPA Initiative (Initiative), was launched in August 2004 as a unique public-private partnership. A memorandum of understanding (MOU) among the California Resources Agency, Department, and Resources Legacy Fund Foundation describes the Initiative process, including the role of the MLPA Blue Ribbon Task Force (BRTF) in overseeing development of a master plan framework and proposals for alternative packages of MPAs (“network components”) along the central coast. It is an understatement to say that this process was complex, and beyond the scope of this report to offer a full description. In summary: the MLPA Central Coast Regional Stakeholder Group (CCRSG) developed three proposed MPA network component packages (designated packages 1, 2, and 3) with BRTF supervision. Packages 2 and 3 became 2R and 3R during final BRTF deliberations. The BRTF selected 3R as its preferred alternative, and forwarded Packages 1, 2R, and 3R to the Department and Commission in April 2006. The Department subsequently developed its own proposal, Package P, that also was forwarded to the Commission.

The Commission’s Decision for the Central Coast

On August 15, 2006 the Commission voted to begin the regulatory process that would establish MPAs along California’s coast in the MLPA Central Coast Study Region (defined by the BRTF as Pigeon Point to Point Conception). This central coast MPA network component is the first step toward establishing an integrated MPA network that eventually will extend along the entire 1,100 miles of California’s coast and include the offshore islands.² In making its decision, the Commission considered all four packages forwarded via the Initiative process: 1, 2R, 3R, and P. The commissioners received analyses of expected biological benefits of each package based on MLPA goals. The commissioners also received estimates of the maximum potential economic

¹ The statute is codified at Fish and Game Code §§2850-2863.

² A draft regulation and supporting documentation were published in mid-October. The Commission is scheduled to formally consider adopting the regulation in March 2007, following a series of discussion hearings.

impact to many of the commercial fisheries in the MLPA Central Coast Study Region, in both spatial and dollar terms. There were no similar estimates for recreational fishing, or for non-consumptive activities, in the study region.³ There were, however, estimates of potential recreational fishing impacts for small boats based on the total fishing area affected and the total number of fishing trips.

An Opportunity

The Commission is in the initial phase of decision making about the next MLPA study region, and has an opportunity to proactively address issues related to the role of socioeconomic information in the design of MPA network alternatives. The BRTF, in its “lessons learned” memorandum, explicitly endorsed efforts to clarify the role of socioeconomic impacts in developing an MPA network.⁴ Two external evaluation reports made essentially the same recommendation.⁵ An effort has been made to coordinate this report and its policy options with other MLPA matters before the Commission.

This report is organized in three parts. Part I is a summary of the Initiative’s approach to socioeconomic issues, and Part II is a discussion of four critiques of that approach. Each critique includes an evaluation of whether a different approach would have made a significant difference for the Central Coast Project. Part III is a presentation and discussion of (1) decisions, and (2) basic policy options for the Commission related to shaping the approach to socioeconomic information in the next study region. Policy options are evaluated against four basic criteria:

- (1) Requirements of the MLPA, California Environmental Quality Act (CEQA), and California Administrative Procedures Act (CAPA) regarding socioeconomics,
- (2) Usefulness to the Commission in making decisions regarding the designation of MPAs,
- (3) Usefulness to stakeholders in developing proposed packages of MPAs, and
- (4) Availability in a timely and cost-effective manner.⁶

This report does not advocate for one policy choice over another, on the assumption that the Commission will wish to hear directly from experts and stakeholders with their recommendations. This report also is not intended to resolve technical socioeconomic issues, as these are best addressed by technical experts.

³ Three alternatives are part of the regulatory analysis: the Commission’s preferred alternative that combines elements of packages 3R and P, Package 1, and Package 2R.

⁴ “Lessons Learned in the MLPA Initiative,” Memorandum from Phil Isenberg, BRTF chair, to Mike Chrisman, secretary, CA Resources Agency, dated October 17, 2006, Recommendation 6.

⁵ The Harty-John “lessons learned” report to the BRTF recommended that the Commission, Department, and BRTF “make a basic policy decision about the role of socioeconomic information for the next study area.” J. Michael Harty and DeWitt John, *Report on Lessons Learned from the Marine Life Protection Act Initiative*, August 17, 2006, Recommendation 7b [Harty-John Report]. The Harty-John Report also concluded that “The Initiative processes and the BRTG recommendations provided a sufficient foundation for deliberation and decision making by the Commission” (Page 49). Dr. Jonathan Raab’s report on the CCRSG process recommended the following: “[A] key policy issue that, at a minimum, deserves clarification is the role socioeconomic impacts should have in determining MPAs, and how this should be realized.” Dr. Jonathan Raab, *Evaluation of the Central Coast Regional Stakeholder Group Process*, August 14, 2006, Recommendation 2 [Raab Report]. Both reports are available on the Initiative web site.

⁶ These four criteria are contained in the scope of work for this report.

The Commission's Marine Committee provided valuable input, as did John Ugoretz and Paul Reilly from the Department. This report also reflects advice from nine experts in the field of socioeconomics, most of whom are personally familiar with the MLPA and Initiative, and whose assistance was essential to developing this document:

Mary Bergen
Elizabeth Chornesky
Chris Costello
Chris LaFranchi
Linwood Pendleton
Caroline Pomeroy
Jim Sanchirio
Astrid Scholz
James Wilen

The contents of this report are solely the work of Harty Conflict Consulting and Mediation.

Finally, it is important to acknowledge that opposition to the designation of MPAs was a factor during the Central Coast Project process and remains significant as a potential factor for the next study region. One way of thinking about this is that, despite the California State Legislature's decision in 1999, the "whether" question remains a primary focus of attention for some, while others are focused primarily on "how." It can be challenging to distinguish criticism that is essentially strategic or tactical from criticism on the merits in this environment. This report reflects a commitment to taking criticism of the Initiative's approach to socioeconomics at face value, and not allowing judgments about motivation to shape exploration of views or development of basic options.

Part I: The Approach to Socioeconomics for the MLPA Central Coast Project

This part of the report examines the Initiative’s Central Coast Project approach to socioeconomics generally in light of the MLPA, and then focuses on four phases: Organizational, CCRSG, BRTF, and Department and Commission. Participants in each phase had distinct roles and objectives, and the availability and significance of socioeconomic information varied in each phase. Attachment A to this report describes socioeconomic information developed for the Central Coast Project in the form of a table.

The Marine Life Protection Act

The MLPA features six goals for a Marine Life Protection Program (MLPP) that focus primarily on protecting, sustaining, and conserving marine life, ecosystems, and natural heritage. There are arguably two indirect references to socioeconomics: Goal 2 refers to helping “sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted,” and Goal 3 refers to improving “recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.”⁷ None of the six goals refers to maximizing socioeconomic value or minimizing or preventing socioeconomic impacts.

MPAs designed under the MLPP must be based on “sound scientific guidelines.”⁸ Other parts of the statute that are relevant to socioeconomics include:

- A master plan process (for the MLPP) is required that takes into account “relevant information from local communities,” and solicits comments and advice from interested parties on issues including “socioeconomic and environmental impacts of various alternatives.”
- The master plan team is required to have five to seven scientists, “one of whom may have expertise in the economics and culture of California coastal communities.”
- The master plan must be based on the “best readily available science” and the “best readily available scientific information.”
- A preferred siting alternative must be developed incorporating local information, “including economic information, to the extent possible while maintaining consistency with [the six MLPP goals] and [five design guidelines]” that do not directly address socioeconomics.

General Approach to Socioeconomics for the Central Coast Project

The Initiative developed a working approach to the role of socioeconomics in the design of MPA networks over the course of the Central Coast Project. This approach was influenced by a specific interpretation of the MLPA and factors such as availability of information, project deadlines, and budget. The central coast approach is summarized in a memorandum to the BRTF from Initiative staff entitled “Socioeconomic Considerations in Developing Alternative Network

⁷ CA Fish and Game Code §§2853(b)(2) and (3)

⁸ CA Fish and Game Code §2853(b)(5)

Components for a Network of Marine Protected Areas Along the Central Coast,” dated January 13, 2006. Key points include:

- The MLPA “gives precedence to ecosystem integrity and habitat protection goals” in designing a network of MPAs
- The statute’s limited references to socioeconomic or economic factors justify a lower priority for MPA decision making
- The MLPA anticipates decision making based on readily available, up-to-date science and provides no suggestion of deferring action for additional data collection or analysis
- CCRSG members had substantial personal knowledge of socioeconomic consequences of the MPAs they considered and that knowledge was supplemented by their outreach to constituencies and public comment
- “It is not possible” to develop monetary measures for valued uses, other than commercial fishing, at the spatial resolution necessary for MPA design [based on data collected for the Central Coast Project]
- As detailed below, additional information on human uses of central coast ocean resources was developed with priority given to data with sufficient spatial detail to be useful in the design and evaluation of proposed MPA network components, and
- The socioeconomic data developed by the Initiative, augmented with Department and public source data, would be sufficient to complete the CEQA and CAPA analyses

Decisions that shaped the Initiative’s approach to socioeconomics were made by the BRTF, the Initiative’s executive director, the Department, and even the Commission. These decisions covered the content of the MLPA Central Coast Regional Profile, the strategy for filling information gaps (see below), the representation and role of social scientists on the Master Plan Science Advisory Team (SAT), the regional goals and objectives developed by the CCRSG and adopted by the BRTF, the content of the draft MLPA Initiative Master Plan Framework ultimately presented to the Commission for adoption in August 2005, and direction given to the CCRSG (and later package proponents) regarding MPA packages.

The Initiative funded nearly \$375,000 in the collection and analyses of socioeconomic information and is providing nearly \$300,000 to fund the CEQA analyses, which will include socioeconomic considerations. The items and amounts funded (rounded) are shown in Table 1. The LaFranchi spatial survey of non-consumptive users was structured to also support work of the National Marine Sanctuary Foundation and the National Marine Protected Areas Center. The available cost information on the MLPA cost share understates the full costs to replicate such a survey.

Table 1: MLPA Initiative Funding for Socioeconomic Data Gathering and Analyses, including CEQA

Item	Amount
Regional profile, socioeconomic sections	30,000
GIS data layers, socioeconomic	5,000
Ecotrust survey of commercial fishermen	134,000
LaFranchi survey of non-consumptive spatial uses (partial cost only)	108,000
Pendleton literature surveys (wildlife viewing and whale watching, scuba diving and snorkeling, and recreational fishing)	11,000
Analysis of local government documents (Sturm)	12,000
Ecotrust analyses of maximum potential impacts of packages of potential MPAs on fishing, including Ecotrust-collected data for commercial fishing and Department data for recreational fishing	36,000
Wilen analyses of maximum potential economic impacts of proposed MPAs	28,500
<i>Subtotal</i>	364,500
CEQA documents (Jones & Stokes), total contract	292,000
<i>Total including CEQA</i>	656,500

Organizational Phase

This phase covers the period from negotiation and signing of the MOU to convening the CCRSG, approximately August 2004 to June 2005. This was a crucial organizational period for the Initiative: the MOU was signed, the BRTF was appointed and began meeting, the MLPA Statewide Interests Group began advising the Initiative via telephone conferences, the executive director and two key staff were hired (November 2004), and the SAT was chartered and began meeting (January 2005). Additional staff were hired during March-May 2005. The BRTF formally selected the Central Coast Study Region on April 11, 2005, and the Department's director and BRTF chair finalized appointments to the CCRSG. The BRTF forwarded a draft MLPA Initiative Master Plan Framework to the Commission in May 2005.

Central Coast Regional Stakeholder Group

This phase covers the activities of the CCRSG, from its initial meeting in June 2005 to its last meeting in December 2005. The stakeholders focused initially on regional goals and objectives, and these were adopted by the BRTF in November 2005.⁹ The primary task for the CCRSG was

⁹ The regional goals and objectives are significant because they include an objective to "minimize negative socioeconomic impacts and optimize positive socioeconomic impacts to all users" to the extent possible and if consistent with the MLPA. This language was used for a project at UC Santa Barbara's Bren School of Environmental Science and Management. The project applied a decision-support software program, MARXAN, that seeks to optimize biophysical goals and then minimize costs, to MPA network design. Project participants

to design multiple MPA network component alternatives, which they accomplished by the end of December. There were three CCRSG packages, denominated 1, 2, and 3, along with several others developed outside the CCRSG process.

The Commission adopted the MLPA Master Plan Framework (Framework) in August 2005. The final version of the regional profile, intended as a comprehensive source of relevant information for the study region, was completed in September 2005.

Appendix A identifies information available to the CCRSG during this period, much of it eventually compiled in the regional profile.

The BRTF, Initiative staff, and Department were aware of gaps in socioeconomic information for the central coast and took steps to address these gaps consistent with their interpretation of the MLPA. The key gaps and responses included:

- *Gap: Spatial data about commercial fisheries.* The Department did not have reliable information about the specific locations of commercial fishing effort in the Central Coast Study Region for many key species, including nearshore rockfishes, cabezon, lingcod, kelp greenling, and spot prawn.¹⁰ There was no transponder program, and logbooks were required only for a few fisheries such as spot prawn and squid. There was no comprehensive on-board observer program at this time for any state-managed fishery. California had information about the value of commercial fishing catch, captured in landings receipts at ports. This *ex vessel* value information was very useful for estimating the direct economic value of commercial fishing in the study region. While landings receipts also contained information about where fish were caught, this information was characterized as inadequate given the fine spatial resolution required. Consequently, there was no single reliable source of information about where commercial fishermen were fishing, how much they were fishing in those locations, and how much they were catching in those locations. This made it difficult to analyze the potential direct impacts on various commercial fisheries of a specific MPA or MPA package proposal.
 - *Response:* The Initiative contracted with Ecotrust to conduct a survey of the most economically important fisheries in the Central Coast Study Region in order to develop spatial information about the relative importance of fishing grounds. This information eventually was used by Ecotrust to evaluate the maximum potential impact of proposed MPA network components on specific commercial fisheries, measured as a percentage of total fishing grounds affected and relative value lost (using two proxies for value, not dollars).¹¹ This body of information was not designed to provide an economic impact analysis. The Ecotrust survey data were not fully available to the CCRSG in designing alternative MPA network components, but were available to the BRTF, Department, and Commission. Ecotrust provided analyses of the potential impacts from proposed MPA packages

reportedly worked with the SAT to incorporate their modeling results into MPA network design. The SAT and Initiative have an ongoing project involving MARXAN according to the executive director.

¹⁰ Logbooks are submitted for the spot prawn fishery, with fishing effort recorded to the Department Fishing Block level (approx. 100 square miles).

¹¹ The scope of Ecotrust's work during the Initiative expanded from an initial contract limited to gathering survey data to a second contract for evaluation of potential impacts.

for each fishery surveyed that assisted some MPA proponents in modifying their initial package to reduce potential negative impacts. This approach was not as valuable for design purposes at the CCRSG level as seeing the confidential Ecotrust maps showing valued fishing locations would have been, according to interviews.

- *Response:* The Initiative contracted with Dr. James Wilen to translate the Ecotrust survey data and analytical results into estimates of maximum potential economic impacts from proposed MPA network components. This information was available to the Commission.¹²
- *Response:* Department developed an estimate of the potential economic impact in dollars to individual fisheries in four proposed MPA packages: 1, 2R, 3R, and P based on the Wilen results. This information was available to the Commission.¹³
- *Gap: Spatial data about recreational fishing and consumptive diving.* Recreational fishing in the study region occurs in different forms, with different data availability. For *charter boats*, there was historic California passenger fishing vessel (CPFV) survey data for the study region for an 11-year period. These data did not reflect significant regulatory reductions in available fishing areas that occurred following passage of the MLPA in 1999. For the *skiff fisheries* and *shore fisheries* there was spatially explicit data on a fine scale available for 2004 from the California Recreational Fisheries Survey (CRFS).¹⁴
 - *Response:* Ecotrust analyzed potential impacts to the recreational skiff fisheries for salmon and rockfish using spatially-explicit information on fishing effort in 2004 from the CRFS.
 - *Response:* The Initiative gathered additional site-specific information from various sources, including CCRSG members, and made it available to the CCRSG for design of MPA network component alternatives.
- *Gap: Spatial data about non-consumptive uses, including diving, kayaking, surfing, and wildlife viewing.* There was very little spatial information about non-consumptive uses in the Central Coast Study Region, or about the potential economic value associated with these activities.
 - *Response:* The Initiative contracted for surveys of five user groups at locations along the central coast (*see* LaFranchi report referenced in Attachment A). Site-specific information was gathered directly from CCRSG members and translated into geographic information system (GIS) layers and maps available for MPA design. However, this information was not sufficiently comprehensive to estimate economic value or potential impacts for the study region.

Even with the gaps and limitations described above, Attachment A describes extensive information about socioeconomics available for use in designing and evaluating alternative MPA

¹² *Estimates of the Maximum Potential Economic Impacts of Marine Protected Area Networks in the Central California Coast* (July 17, 2006).

¹³ *Net Value of Stated Importance of Total Fishing Grounds Affected for Selected Fisheries*, prepared by the Department.

¹⁴ The Commission received a report on the CRFS from DFG dated March 2006, entitled “California Recreational Fisheries Survey Annual Review 2005.”

network components. Most of this information was available in a variety of formats that included documents, maps, online databases and tools. However, the regional profile did not contain the confidential Ecotrust maps or descriptions of relative levels of fishing effort for specific commercial fisheries. CCRSG members also shared personal knowledge that was not part of the regional profile.¹⁵

Using this information, CCRSG members ultimately were able to develop three alternative packages of MPA network components that addressed some socioeconomic impacts, such as future access to high value dive sites. The CCRSG alternatives also were evaluated for potential maximum relative impacts to commercial and recreational fisheries once the Ecotrust survey data became available. Package 1 proponents designed an alternative that minimized socioeconomic impacts to fisheries.¹⁶ The BRTF eventually advised proponents of Package 2 to reduce socioeconomic impacts associated with their initial proposal, which they did.

It appears that all information developed by the Initiative describing human activity in the study region (consumptive and non-consumptive, market and non-market) was available to the CCRSG during this phase, although its timing was not optimal. The available information about fisheries activity and its value was more extensive and detailed than information about non-consumptive uses, and this disparity was criticized by some CCRSG members. Landing receipts supported estimates of the value of individual commercial fisheries, but there was no similar source of value information for non-market activities such as diving, kayaking, and wildlife viewing. The Initiative supported collection of some non-market activity data (e.g., LaFranchi) but did not develop value estimates. Compared with products developed for the Department and Commission, the CCRSG had less information about the estimated economic value of human activity in the study region (e.g., Wilen products).

As already noted, the CCRSG had partial access to information evaluating the potential impacts of MPA network component alternatives on commercial fisheries (e.g., Ecotrust relative importance data). This information became available fairly late in the CCRSG process, and the restrictive format (no access to confidential maps) was a source of frustration and criticism.¹⁷ The BRTF, Department, and Commission received additional evaluations of maximum potential impacts to commercial fisheries and recreational skiff fisheries (Ecotrust, Wilen, Department) as part of their decision making about different MPA packages. The Initiative did not develop an evaluation of non-consumptive, non-market economic impacts during any phase. Nor did it develop an estimate of total economic value associated with all activity in the study region.

¹⁵ The Raab Report found that among survey respondents the regional profile was “only mildly helpful.” The cited reasons for this outcome include (1) too much information, and (2) too little time to verify the information with CCRSG members selected for their local knowledge. CCRSG members and staff viewed the regional profile as “a lost opportunity.” See Raab Report pp. 28-29.

¹⁶ The BRTF advised Package 1 proponents to increase the potential biophysical benefits associated with their proposal.

¹⁷ Advice from Ecotrust and other experts suggests it would be relatively straightforward to correct this limitation in the next study region while preserving confidentiality.

In summary:

- The CCRSG received extensive biophysical information
- The CCRSG received limited statistical information about human activity and its economic value in the study region. Commercial fisheries information was significantly more abundant and detailed.
- The CCRSG had very limited formal information evaluating potential socioeconomic impacts to use in designing MPA alternatives, and this only addressed fisheries. The CCRSG had significant personal knowledge from stakeholders and other interested parties.

Blue Ribbon Task Force Phase

This phase began in January 2006, following termination of the CCRSG phase, and concluded following the BRTF's decision on a recommended alternative and formal transmittal memorandum to the Department (and eventually the Commission).¹⁸ The BRTF and Commission met jointly to mark this transition in May 2006.

The BRTF was active much earlier, beginning with its initial meeting in October 2004, and made key decisions about the study region, the regional goals and objectives, and draft MLPA Master Plan Framework. The BRTF listened to concerns raised by CCRSG members (and the public) about information gaps, including concerns about limited socioeconomic information. The BRTF also took steps to encourage proponents of different CCRSG packages to accommodate the interests of other groups, as noted above.

The BRTF relied on the CCRSG to review available information about human activity in the study region, including personal knowledge of CCRSG members, and incorporate that information into MPA network alternatives. The BRTF had access to more evaluation information in this phase, including estimates of maximum potential impacts for key fisheries in the study region prepared by Ecotrust. This increase in availability of evaluative information continued through the next phase, and can be seen in Attachment A.

Department and Commission Phase

This phase covers the period June-August 15, 2006, through the Commission's decision to begin the regulatory process to designate MPA network components along the central coast. The regulatory process has been underway since that time, with draft regulatory documents being released in October 2006. The Commission is scheduled to vote on a final MPA package with regulations in March 2007.

The Department devoted significant resources, working with the SAT, to evaluating potential fisheries impacts, and had access to products from Ecotrust and Wilen. The Department's Package P reflects an effort to reduce socioeconomic impacts consistent with the regional goals and objectives below the levels in the BRTF's Package 3R. The Department prepared an

¹⁸ The BRTF was active during all phases of the Central Coast Project described in this report, and held its final meeting in November 2006. For purposes of this report the focus is on the period January-May 2006.

estimate of maximum potential impact for specific fisheries by sub-region for use by the Commission.

The Department also delivered to the Commission the draft Master Plan for MPAs in July 2006. While socioeconomics was not the focus of the draft, the plan would modify the approach taken in the Framework.

The Commission had the most information regarding *evaluation* of potential socioeconomic impacts available for its decision making. In particular, the Commission benefited from Ecotrust's data on the maximum relative impacts of all MPA packages under consideration, from Wilen's analysis of maximum economic impacts, and from the Department's additional analysis of economic value and impacts. The Commission also had the benefit of two reviews of Ecotrust's methodology, one prepared by Wilen and one by the California Fisheries Coalition (*see* Attachment A). All these evaluations addressed commercial and recreational fisheries; there was no similar analysis available to the Commission of potential impacts associated with non-consumptive uses.¹⁹ Both the Ecotrust data and Wilen analysis were presented as highly aggregated averages for fisheries (reportedly in response to specific direction), and this approach appeared to underestimate impacts to specific individuals (e.g., the spot prawn trap fishery). However, information for individuals reportedly was available in the data set.

¹⁹ By comparison, the BRTF had the benefit of Ecotrust's analysis of maximum relative impacts, but not the additional work by Wilen and the Department.

Part II: Critiques of the MLPA Initiative's Approach to Socioeconomics

This section of the report reviews four basic critiques of the Initiative's approach to socioeconomics covering:

- (1) The Initiative's interpretation of the MLPA's requirements for socioeconomics;
- (2) The amount and quality of information about human activity, economic value, and impacts in the study region;
- (3) The availability of information for the CCRSG; and
- (4) A framework or structure for socioeconomics in MPA network design

A fundamental question applies to each critique: *Would a different approach have influenced the design and evaluation of MPA network component alternatives, including the Commission's final decision?*

Critique 1: Interpretation of MLPA requirements

The language of the MLPA leaves unanswered a number of basic questions about the role of socioeconomic information in designing and evaluating MPA network component alternatives. *In particular, the statutory language does not directly answer whether limiting potential ecosystem benefits in order to minimize potential socioeconomic impacts associated with designation of an MPA network (or network component) is consistent with the MLPA.*²⁰ There was no authoritative interpretation of the statute to serve as a foundation for decision making during the Central Coast Project, such as a legal opinion from the California Attorney General or the Department's General Counsel.²¹ The regional goals and objectives adopted by the BRTF reflect the uncertainty about the appropriate role of socioeconomics in MPA network design. A working interpretation of the statute evolved over the course of the Central Coast Project that is reflected in decisions such as contracting to fill data gaps, the staffing and focus of the SAT, and the Framework. The Initiative's working approach to socioeconomic issues is described in a January 13, 2006 memorandum from Initiative staff to the BRTF [*see Attachment B*].

The view of many consumptive users is that MPA network component design should take account of how potential socioeconomic impacts are distributed, and that this is consistent with the MLPA. According to this view it is entirely appropriate to minimize socioeconomic losses associated with MPA designation, and a robust socioeconomic picture should be developed in order to understand all dimensions of such losses, even if this requires gathering information that is not readily available. There should be a balancing of biophysical benefits against socioeconomic impacts, according to some advocates. Consumptive users felt that the Initiative's

²⁰ The significance of this question can be seen in the regulatory documents prepared to implement the Commission's preferred alternative. The Informative Digest/Policy Statement Overview contains the following statement: "From an economic and social perspective, the proposed regulation attempts to minimize potential negative socio-economic impacts and optimize potential positive socio-economic impacts for all users, to the extent possible." http://www.dfg.ca.gov/mrd/mlpa/pdfs/isor632_digest.pdf.

²¹ Such an opinion would not have the force of law, and would not be controlling on any court interpreting the MLPA in the future.

interpretation of the MLPA as placing a priority on satisfying biophysical criteria was unduly narrow, inflexible, and unfair according to this critique. Moreover, the Initiative's effort to gather and analyze information about potential impacts was inadequate.²²

The perspectives of conservation-oriented stakeholders and interest groups, and of non-consumptive users, are very different; they generally support the Initiative's primary focus on satisfying biophysical criteria. According to this view, the MLPA does not require minimization of socioeconomic impacts, and reducing such impacts by reducing biophysical benefits is contrary to the intent of the MLPA. The strongest version of this view is that the MLPA requires optimization of biophysical benefits, even if there are socioeconomic impacts. However, in cases where the biophysical benefits available from different alternatives are comparable, the statute may allow decision makers to select the alternative that does the most to minimize impacts.

Would a different approach have influenced the design and evaluation of MPA network alternatives, including the Commission's final decision? If the Initiative had interpreted the MLPA as requiring or allowing equivalent weighting of biophysical benefits and socioeconomic impacts in decision making there potentially would have been significantly different decisions about resource allocation and, ultimately, MPA network component design. On the other hand, it does not appear that the Initiative adopted a pure "optimization" approach to biophysical benefits. If this had been the case it is likely the results would have been different, because the decision space defined by the recommended alternatives would have included potentially more biophysical benefits. This conclusion is supported by proposed Package AC, which protected the largest area. Package AC was evaluated by the SAT and considered by the BRTF, but was not recommended to be forwarded for Commission consideration as an alternative package.²³

Critique 2: The amount and quality of information about human activity, economic value, and impacts

This critique is based on a perceived lack of basic socioeconomic information relevant to designing and evaluating MPA network components for the Central Coast Project. Data gaps included:

- Information needed to present the full range of human activity in the study region at a useful spatial resolution, including consumptive and non-consumptive uses as well as religious and cultural
- Reliable estimates of the economic value of all activities, both direct and indirect, and
- Reliable estimates of economic impacts of a specific MPA network component alternative on all activities. In some cases the limitations were linked to doubts about methodologies for estimating value and potential impacts, such as for non-market activities.

²² Other approaches to addressing the distribution of economic impacts, such as developing compensation schemes rather than reducing biological benefits, were not a significant part of the public discussion.

²³ Ecotrust's analysis of Package AC indicated a potential for relatively higher impacts to fisheries. See Scholz *et al.*, "Summary of potential impacts of the February '06 MPA packages on commercial and recreational fisheries in the Central Coast study region," Final version, revised 8 March 2006.

There also was a lack of symmetry in the level of resources committed to developing information about different uses according to some participants. For example, the Initiative devoted resources to developing and analyzing economic information for commercial fishing for many species, but did not develop similar information for other consumptive and non-consumptive uses. This asymmetry has generated significant criticism, and is consistent with the view noted above that the MLPA should not be interpreted as a “loss minimization” statute if that approach significantly reduces biological benefits.

A member of the Commission’s Marine Committee has asked: “Why don’t we have a good spatial understanding of all human activity in the study region, consumptive and non-consumptive?” The answer is that the data needed to present a comprehensive picture of activity were only partially available at the beginning of the central coast process, and the Initiative established priorities to fill data gaps based on: (1) its interpretation of the MLPA; (2) cost-effectiveness for MPA design, evaluation, and selection; (3) sensitivity to the distribution of potential impacts; and (4) timeliness and schedule. The result was:

- a consistent emphasis on information needed for biophysical criteria;
- significant attention to improving understanding of commercial fishing activity, value, and potential first-order impacts; and
- a principle of gathering spatial use information about non-consumptive, non-market activity around Monterey Bay, widely regarded as the highest used area.

The Initiative’s decision makers concluded that CCRSG members had a reasonable level of personal knowledge about non-consumptive activity in the study region and would bring that to bear in designing alternatives.²⁴ They also concluded that spending significant resources on outside experts in order to develop reliable estimates of the economic value of non-consumptive activity, and estimates of the potential impact to non-consumptive uses from a particular MPA network alternative, would not be justified by the value of the products.²⁵ This conclusion rests on three basic assumptions: (1) reliable non-consumptive data cannot be developed at a sufficient scale to influence MPA network design within reasonable cost and time constraints, (2) establishing MPA networks generally benefits non-consumptive users and, (3) at least in the short-term, negative impacts are likely to be distributed among consumptive users. If these assumptions are flawed, then the Initiative’s approach merits reconsideration and possible adjustment for the next study region.

The desire of non-consumptive users for equivalent treatment is understandable, as is the desire of experts for a complete data set. But equivalence was not mandated by the circumstances of the Central Coast Project or the MLPA’s requirements for MPA network component design in the view of the Initiative.

²⁴ As noted above, this is consistent with the Initiative’s reading of the MLPA and its focus on personal knowledge.

²⁵ Here is language from the Initiative staff’s memorandum to the BRTF: “While estimating monetary values of use is possible for some activities, especially commercial fishing, it is not possible to develop equivalent monetary measures for other valued uses, especially at the fine spatial resolutions needed for decisions regarding marine protected areas.”

Several experts consulted for this report commented on the importance of having a more complete picture of *non-consumptive* activity, value, and impacts in the study region, and offered two arguments:

- First, they pointed to the occasionally extreme assertions made to the Commission and BRTF about likely impacts from MPA designation and suggest that better information would limit or undermine such assertions.
- Second, they pointed out that the basic assumption that establishing MPA networks will inevitably benefit non-consumptive users has not been reliably established, even for the Monterey Bay National Marine Sanctuary. Since the MLPA's Goal 3 requires improved recreational opportunities, better data about impacts on non-consumptive uses would be consistent with statutory requirements. Such data also might provide the Commission and others a better understanding about how the benefits are distributed along the coast, depending on methodology.

One argument for enhancing the picture of activity, value, and impacts for *consumptive* users beyond that developed for the Central Coast Project is related to the Commission's evaluation, as final decision maker, of equity, fairness, balance, and proportionality in addition to legality in the distribution of impacts and benefits. A related point is that making decisions on the basis of an estimate of maximum potential impact is an over-simplification, and that complexity is more appropriate when negative impacts are likely, at least over the short-term. A third argument is forward-looking: effective management and enforcement will require the support of local communities and resource users, and it will be important to accurately describe activities, costs, and benefits to build this support.²⁶

Would additional information have significantly influenced the design, evaluation, and selection of MPA network alternatives, including the Commission's final decision? The primary focus of the MLPA is on meeting biophysical criteria, and this would not have changed. Criteria for MPA size, spacing, and habitat types are significant factors for MPA network design. It is conceivable that better information about maximum potential impacts to a few commercial fishermen may have marginally influenced MPA network alternatives at the CCRSG level, but this result is not inevitable. The same is true for improved information about recreational fishing activity and potential impacts (salmon and rockfish survey data were analyzed because these are the principal boat-based recreational fisheries within the central coast). It is not obvious that improved information about non-consumptive activity, and non-market values and potential impacts, would have significantly affected decision making, because of the basic assumption that beneficial impacts are inevitable. Nor is it obvious that better data would reveal clear tradeoffs between consumptive and non-consumptive impacts, or assist decision makers in weighing these tradeoffs, although this is possible. The Commission, Department, and BRTF addressed concerns about equity and fairness using available information within the limits permitted by the MLPA, and it is debatable at best whether additional information would have substantially changed these decisions.

²⁶ The Initiative has been working to develop recommendations for monitoring, research, and evaluation for the proposed central coast MPA network components.

Critique 3: Availability of Information to the Central Coast Regional Stakeholder Group

This critique takes different forms but can be distilled to the following: the CCRSG's access to socioeconomic information needed for MPA network design was inadequate. This critique is not about the content of information (addressed in Critique 2) but rather about timing, safeguards imposed to protect confidentiality, and differences in the type of information available.

Timing. Overall, the schedule for the CCRSG process did not align well with efforts to gather and compile existing information, or with efforts to gather, compile, and analyze new information. The process summary in Part I of this report illustrates the point that the timing of some information limited the ability of CCRSG members to use this information in package design. As one example, the regional profile was not in final draft form and ready for the CCRSG in June 2005. The final version was completed in September, and contained information not in the June version. The report on non-consumptive activity around Monterey Bay commissioned by the Initiative to fill a data gap also became available during September. Perhaps most significantly, the Ecotrust survey of the relative value of fishing areas was not available until November, and even then the CCRSG did not have direct access to maps in trying to incorporate that information into MPA network component designs.²⁷

Confidentiality. The spatial information supplied by commercial fishermen participating in the Ecotrust survey was treated as confidential. The CCRSG did not have direct access to maps drawn by fishermen, although a system for verbally conveying information on those maps was devised.²⁸

Information Types. The CCRSG ultimately had access to most of the same descriptive data about activity in the study region as the BRTF, Department, and Commission. The CCRSG did not have access to the same evaluation data. For example, Ecotrust's evaluation of potential maximum impacts from different MPA network packages, and Wilen's translation of estimated maximum potential impacts into dollars, were not available to the CCRSG. The Commission had the most information potentially available, including peer reviews of methodology for estimating maximum potential impacts to commercial fisheries. Practically speaking, however, it would have been unrealistic to expect the commissioners to consider the full universe of information that accumulated during the Central Coast Project in weighing the four alternatives.²⁹

There is another type of information that merits attention: the views of the BRTF members. The BRTF-CCRSG feedback loop yielded results when the BRTF advised Package 1 proponents to demonstrate more biophysical benefits and advised proponents of Package 2 to reduce potential direct impacts on commercial fisheries. This feedback loop was not available following the

²⁷ The Raab Report addressed this criticism. See pp. 29-30.

²⁸ The potential for a solution to this problem in the next study region was noted earlier.

²⁹ This critique highlights a spectrum of views about the nature of the Commission's review, the focus of its decision, and the types of information that are most relevant. The view at one end is narrow: the Commission should be deferential to the efforts of a BRTF, Department, and stakeholders, and should focus on broad policy questions rather than the boundaries of individual MPAs. The other view is much broader: the Commission has a duty to fully examine all the issues raised by proposed MPA network component alternatives, even if that entails revising the results of painstaking efforts by advisory bodies (like the BRTF and CCRSG) or the Department. Similar competing views also were articulated about the BRTF in relation to the CCRSG.

BRTF's detailed consideration of the three packages in March 2006. It is an open question whether the CCRSG, given one more opportunity, would have further modified any of the three packages, given other factors. This type of evaluation information may be valuable for a future stakeholder group, as suggested by at least one external report.³⁰

This critique highlights an important choice about the role of stakeholders. The Central Coast Project relied on a BRTF-regional stakeholder group model described generally in the MOU and refined by the Initiative, including the BRTF. Stakeholders (and others) developed alternative MPA network components under this model and received feedback from the BRTF. If this approach is continued in the next study region, it seems reasonable to assume that the quality of stakeholder recommendations will be influenced by the quality of available information, for both descriptive data and a basic level of evaluation data. Some may argue that stakeholders in particular do not need the same type of evaluation data as the Commission, because the stakeholders' task is different. For example, stakeholders may not need a fine-grained expert analysis of the potential impacts to an individual fisherman of a proposed MPA, in part because this information can be incorporated into stakeholder decision making based on personal knowledge, as intended by the MLPA. Stakeholders also may not need external peer reviews of socioeconomic survey methodologies when designing MPA network components under this view. The key point for the Commission is that decisions about the types of information that should be provided to stakeholders are linked to their role under the MLPA as interpreted by the Initiative.

Would a different approach to timing, confidentiality, and data types have influenced the design and evaluation of MPA network alternatives, including the Commission's final decision? Two of these factors—timing and confidentiality—operated as barriers to the CCRSG, and it is reasonable to conclude that the *process* of designing MPA network alternatives within the CCRSG would have been somewhat different with these barriers removed. It also is reasonable to conclude that removing these two barriers would have had some impact on the *knowledge* of CCRSG members. It is debatable at best whether these barriers ultimately affected the substance of CCRSG packages 1, 2, or 3 in a significant way, or that these barriers had a significant impact on the Commission's decision. One reason, already noted, is that the primary drivers for network design under the MLPA are biophysical criteria, not socioeconomic criteria. A second is that CCRSG members, particularly Package 1 proponents, were able to draw on personal knowledge about fisheries to address high-value areas. This information also was potentially available to proponents of other packages within the CCRSG forum, and also to the Department.

The third factor, differences in the types of data available to the CCRSG on one hand, and the BRTF, Department, and Commission on the other, could be viewed as a barrier, but also could be viewed as a reasonable distinction in the respective roles of different entities for certain types of information. In particular, if the Commission's role is to deliberate and decide on the range or degree of potential impacts from MPA network components, it may be appropriate to develop more detailed evaluations of potential impacts for the Commission. There may also be practical reasons of timing: evaluating impacts takes time, and requires a specific proposal. Ultimately it

³⁰ See Raab Report, pp. 34-39 (describing process) and pp. 54-55, Recommendation E-6.

may be possible to develop “real time” analytical tools, in which case the question of differential information will become less significant because stakeholders would have access to the tools.

For a handful of individual commercial fishermen it is possible that impact evaluation data might have influenced design alternatives at the CCRSG level. This information was potentially available at a personal level, however, and could have been incorporated into one or more CCRSG alternatives as long as the individuals were able to participate. According to interviews, the Department had the opportunity to learn of potentially significant impacts to individual fishermen during its process for designing Package P. Evaluating whether such modifications would have been consistent with the biophysical criteria is beyond the scope of this report. For the future, interviews suggest there are ways to identify such individual impacts earlier in the MPA network component design process. It also is possible that another iteration, or feedback exercise, between the BRTF and CCRSG might have changed proposed designs. Overall, it appears at best debatable whether CCRSG barriers—related to timing, confidentiality, and data types—would have significantly changed the CCRSG’s alternatives or the Commission’s final decision.

Critique 4: A framework or structure for socioeconomics in marine protected area network design

During interviews for this report several experts observed that the Initiative lacks a basic analytical framework or structure for describing economic activity, estimating its economic value, and evaluating potential impacts and benefits associated with proposed MPA network components. According to this critique, agreement on a basic framework would clarify decision making and reduce controversy and complaints.

The Initiative’s SAT developed a working model for the biophysical aspects of MPA network design, reflected in design guidelines and evaluation criteria that were incorporated into the Framework. This model was the organizing structure for evaluating the different packages developed by the CCRSG, Department, and Commission. The model and its core features (protection of habitats specified in the statute) and guidelines regarding size and spacing of individual MPAs (developed from analyses of adult home ranges and larval dispersion of many species) provide an organizing structure for design of proposed network elements of MPAs, and for evaluation of such proposals. The SAT biophysical guidelines also provide starting points for long-term monitoring and adaptive management of a network of MPAs; they will also inform research. The SAT guidelines and evaluations of proposed packages have been the subject of two external peer reviews. They were also reviewed by three fisheries scientists retained by the California Fisheries Coalition.

The Initiative’s overall approach to socioeconomics does not reflect a similar analytical framework, according to several experts. The SAT did not propose, develop or adopt such a framework, and the Framework does not serve this role (see below). The socioeconomic products prepared for the Initiative (*see* Attachment A) reflected the professional expertise and methodologies of different experts, including two SAT members, but were not intended to fit within a common analytical framework. The preceding discussion hopefully makes clear that this is not a purely theoretical or academic point: whether to focus solely on developing an

accounting of first-order economic activity in the study region, or to expand that focus to account for second-order economic effects, has potentially significant implications for schedule and budget. The information that would go into such an analysis, and the methods for gathering that information, also would be influenced by the prevailing socioeconomic framework. Information about the attitudes and values of resource users, for example, might be relevant under one framework and irrelevant under another.

MLPA Master Plan Framework

The Framework adopted by the Commission in August 2005 lays out a stepwise process for MPA design in Section 2 of the document, entitled “Process for Designing Alternative Marine Protected Area Network Proposals.”³¹ The Framework describes a series of tasks and activities, and includes the following:

- Activity 1.3.7: “The regional stakeholder group and the science advisory sub-team *identify fishing and non-fishing activities affecting marine wildlife and habitats* in the study region.” [emphasis supplied]
- Activity 1.4: “Design regional ecological and socioeconomic goals and objectives and alternative network concepts.”
- Activity 2.2: “Design MPA goals and objectives (ecological and socioeconomic) for each potential MPA.”
- Activity 2.3: “Identify potential positive and negative impacts (ecological and socioeconomic) of the MPA(s) on a regional scale.”
- Activity 2.5.3: “The regional stakeholder group and science advisory sub-team identify likely direct and indirect socioeconomic effects of the MPA(s) that should be considered in subsequent analyses.”

The Framework does not specify clear criteria for carrying out activities related to socioeconomics. It directs stakeholders and decision makers to design and evaluate MPA network alternatives based on (1) the goals and objectives of the MLPA, (2) regional goals and objectives, (3) goals of the statewide network, and (4) goals of other relevant state law.³² The Framework does not provide clear and consistent direction about data relevance, policy priorities, or a model for analyzing tradeoffs between competing choices.

There is another perspective, which begins with the view that the MLPA does not require or even anticipate a significant role for socioeconomic information in achieving statutory goals. In light of the MLPA’s “best readily available scientific information” standard, and its direction to gather “information and views from people who live in the area and other interested parties,” there is no need for a detailed socioeconomic framework to guide the work of other experts in describing and analyzing potential socioeconomic impacts of MPA network component alternatives. Stakeholders can advise decision makers about potential impacts based on personal knowledge. Decisions to enhance understanding by the use of formal methods should be addressed individually, similar to the approach for the Central Coast Project. A framework would potentially limit future flexibility, and would consume valuable resources to accomplish.

³¹ Framework, pp. 17-33. See step-by-step process description.

³² One example is the language in Activity 2.5.1 (p. 30).

To the extent CEQA and CAPA impose requirements, these are well understood and do not necessarily require significant data gathering or evaluation.

One response to criticism about the lack of a common framework would be to develop one for future study regions.³³ As noted earlier, the Initiative is pursuing a significant modeling project based on the MARXAN decision support tool. The modeling project involves assumptions about the role of socioeconomics in relation to biophysical priorities. This report lacks sufficient information to fully explain potential benefits of such a model, and a briefing from SAT members may be helpful to the Commission.

In any event, interviews for this report reveal moderate support among experts for developing such a framework, along with guarded optimism and uncertainty about the prospects for finding substantial agreement on the substance, and further uncertainty about the time required for this effort. Advocates of this step point to constructive discussions at workshops sponsored by NOAA's National Marine Protected Areas Center as evidence that substantive agreement can be achieved. If a framework is desired, one potentially important step for the Commission would be to clearly articulate a basic policy regarding the role of socioeconomics in design of MPA networks under the MLPA, as discussed in the first critique above. This would help to define the appropriate focus for a framework discussion and limit forays into policy making.

Would a shared framework have influenced the design, evaluation, and selection of MPA network alternatives, including the Commission's final decision? A short answer to this question is: Assuming there had been timely agreement on such a framework during the Central Coast Project, it could have reduced the level of conflict and controversy about socioeconomics. There potentially would have been basic agreement on the types of data to be collected, the appropriate methodologies, and the products. A framework could have influenced design, evaluation, and selection, depending on its basic assumptions (such as requirements of the MLPA discussed in Critique 1, above). A framework also might have included enhanced peer review, which could have reduced challenges to specific socioeconomic products.

³³ The Department proposed some modifications to the design process in its draft MLPA Master Plan for MPAs dated July 2006. These proposals include language related to socioeconomics that provides a greater level of guidance about how to evaluate socioeconomic impacts to fisheries. For example, Activity 3.1.2 in the draft states: "The science advisory sub-team and science team, in conjunction with the Department and potential contracted support, prepare a preliminary analysis of the maximum potential impact of each proposal to existing fishing in terms of area set aside versus frequency of use." Without specifically endorsing this approach, this level of guidance likely would reduce opportunities for conflict and controversy in the next study area. There may be a tradeoff in terms of flexibility to respond to changing circumstances.

Part III: Decisions and Policy Options for the Next MLPA Study Region Related to Socioeconomics

Introduction

The Commission has the opportunity to make at least three decisions for the next study region that could clarify the Initiative's approach to socioeconomics. The first involves the legal requirements of the MLPA, and is analyzed under Decision A. The second involves the substance of a socioeconomic model for the Initiative, and is analyzed under Decision B. The third involves the Commission's preferred role in developing policy for socioeconomics, and is analyzed under Decision C. Each of the decisions offers multiple options for the Commission; these are analyzed using the four criteria of (1) satisfying legal requirements, (2) usefulness to commissioners, (3) usefulness to stakeholders, and (4) availability in a timely and cost-effective manner.

Decision A: Address the absence of an authoritative interpretation of the MLPA regarding the role of socioeconomic information in designing and evaluating MPA network alternatives. The basic options for the Commission are to (A-1) seek an authoritative interpretation of the MLPA's requirements in the form of a legal opinion, (A-2) adopt the Central Coast Project working interpretation of the MLPA, or (A-3) do nothing at this time and focus on resolving specific issues related to socioeconomics.

Option A-1: Seek an authoritative interpretation of the MLPA's requirements regarding the role of socioeconomic information from the California Attorney General and counsel to the Department of Fish and Game. The Commission would develop a written request that identifies the specific questions of interest and form of guidance that would be useful to the Commission. This process would begin immediately, with a goal of having an opinion within 60 days of a Commission decision in order to avoid delays and support decision making for the next study region. Rely on the opinion to structure substantive decisions about socioeconomics for the next study region, as detailed below for Decision B.

Option A-2: Do not seek an authoritative legal opinion at this time. Instead, formally adopt the "working interpretation" of the MLPA reflected in the January 16, 2006 Initiative staff memorandum to the BRTF [See Attachment B to this report]. Use this interpretation as the basis for decision making about socioeconomics in the next study region, as detailed below in options for Decision B. Draft regulatory documents prepared for implementing the Commission's preferred alternative in the central coast suggest that the central coast approach satisfies CAPA and CEQA. Consider modifications that clarify the relationship of biophysical and socioeconomic criteria in MPA network design, and that reflect any changed circumstances in the next study region.

Option A-3: Take no action at this time regarding legal requirements of the MLPA. Focus instead on specific options for addressing socioeconomics in the next study region, as detailed below for Decision B.

Analysis: Decision A

	Option A-1: Obtain an authoritative legal opinion to shape decisions	Option A-2: Adopt the Central Coast Project approach	Option A-3: Take no action at this time and focus on specific substantive issues
<i>Satisfies requirements of MLPA, CEQA, and CAPA</i>	NA	<ul style="list-style-type: none"> ▪ Draft regulatory documents suggest the central coast approach satisfies CEQA and CAPA 	<ul style="list-style-type: none"> ▪ Draft regulatory documents suggest the central coast approach satisfies CEQA and CAPA
<i>Usefulness to the Commission</i>	<ul style="list-style-type: none"> ▪ A well-crafted legal opinion could reduce potential for future conflict and controversy within the Commission and among stakeholders related to interpretation of MLPA’s intent, and help re-focus resources on other issues ▪ Potentially reduces future litigation risk on socioeconomic issues, but also could increase risk of challenge to the central coast approach depending on its interpretation of the MLPA and any minimum requirements ▪ Provides a potential foundation for the Commission to articulate specific principles for use by the BRTF and stakeholders, and embed these principles in the Master Plan Framework. See decisions B and C. ▪ Potential risks are linked to the quality of the product: if it is unclear, or too general, the goal of reducing controversy and improving focus will not be met, and criticism of the product may extend to the Commission. ▪ To the extent an opinion limits flexibility to interpret the MLPA, this will likely limit the range of potential 	<ul style="list-style-type: none"> ▪ Creates opportunity for Commission to manage future testimony by pointing to adoption of Initiative approach ▪ Preserves some policy flexibility for Commission, BRTF, and staff to address specific issues as they arise. ▪ Opportunity to address specific socioeconomic issues through decisions B and C below ▪ Eliminates uncertainty about contents and consequences of a legal opinion ▪ Memorandum was not intended as a comprehensive policy model, but rather as an explanation of the basis for decision making on socioeconomics. ▪ Some statements in memorandum may require modification for next study region. ▪ Creates expectation that next study region will follow central coast approach, which has both positive and potentially negative implications ▪ Forces Commission to take a controversial position ▪ People who disagreed with Central Coast Project 	<ul style="list-style-type: none"> ▪ Preserves policy flexibility ▪ Avoids potential disagreement among commissioners on controversial issue ▪ Continues potential for conflict and controversy over MLPA interpretation ▪ Opportunity to address specific socioeconomic issues through decisions B and C ▪ Future legal opinion remains open as an option, but with increased risk as more decisions are made

	Option A-1: Obtain an authoritative legal opinion to shape decisions	Option A-2: Adopt the Central Coast Project approach	Option A-3: Take no action at this time and focus on specific substantive issues
	policy discretion for the next study region.	<p>interpretation of MLPA, or who disliked specific methodologies, will continue to disagree at the Commission level</p> <ul style="list-style-type: none"> ▪ Potential uncertainty about final Commission decision on preferred MPA network alternative for next study region despite endorsing central coast approach. Policy shift by Commission would require clear direction about preferred approach, and is likely to increase conflict and controversy 	
<i>Usefulness to stakeholders</i>	<ul style="list-style-type: none"> ▪ Clear legal guidance would serve as a shared point of reference for stakeholders in the next MLPA study region, with a potential to significantly reduce the amount of time devoted to conflict over treatment of socioeconomics. ▪ The quality of the guidance would determine its value: the more concrete and specific, the greater its potential to limit extended controversy. [See discussion above.] ▪ Unlikely that all stakeholders will endorse this approach or readily accept the product. 	<ul style="list-style-type: none"> ▪ Reduces uncertainty but doesn't eliminate controversy ▪ Dissatisfaction over limited socioeconomic information likely to continue ▪ Possibility for stakeholder action to force changes 	<ul style="list-style-type: none"> ▪ Increases potential for stakeholder conflict over MLPA requirements, and for shifting resources to address those conflicts ▪ Addressing specific issues may reduce conflict
<i>Availability in timely and cost-effective manner</i>	<ul style="list-style-type: none"> ▪ Time requirement for opinion unclear. 60 days is a proposal that hasn't been tested. Need to identify specific Commission actions and time requirements. ▪ Could impact timing of next 	<ul style="list-style-type: none"> ▪ No wait for a legal opinion ▪ Possible time requirement for a formal Commission decision ▪ No additional cost ▪ Active stakeholder opposition could threaten 	<ul style="list-style-type: none"> ▪ No wait for a legal opinion ▪ No additional cost

	Option A-1: Obtain an authoritative legal opinion to shape decisions	Option A-2: Adopt the Central Coast Project approach	Option A-3: Take no action at this time and focus on specific substantive issues
	<p>steps for study region</p> <ul style="list-style-type: none"> ▪ Need for lead times of 6-9 months in order to have useful socioeconomic information available for stakeholders tasked with designing MPA alternatives ▪ Additional costs would be borne by state agencies. Other cost impacts uncertain. 	<p>schedule and increase costs</p>	

Decision B: Determine the California Fish and Game Commission’s overall preference for a substantive approach to socioeconomics for the next MLPA study region. Basic options for the Commission are to (B-1) continue the central coast approach, (B-2) adopt some discrete modifications based on expert advice, or (B-3) develop an overall analytical framework for MLPA socioeconomics that would shape specific modifications. A decision by the Commission on this substantive question is linked to Decision C, below, which addresses the Commission’s role in relation to the BRTF and other entities in the next study region.

Option B-1: Endorse the Central Coast Project’s substantive approach to socioeconomics for the next study region, with some improvements to ensure information is available to stakeholders for initial MPA network design. The basic elements would include:

- A regional profile with approximately the same emphasis and level of detail
- Focus on gathering spatial data about commercial fishing in the study region using a methodology similar to that developed by Ecotrust
- Gather available data about recreational fishing and non-consumptive uses, and identify areas of high value for these uses
- Do not commit time and funding to develop a comprehensive accounting of economic activity in the study region
- Replicate efforts to estimate maximum impacts to commercial fisheries in spatial and dollar terms, using the same methodologies
- In one improvement from the Central Coast Project, take steps to ensure that the commercial fisheries impact analysis is available to stakeholders for the design of MPA network alternatives
- Do not estimate direct socioeconomic impacts to recreational and non-consumptive users
- Do not estimate second- and third-order socioeconomic impacts to any resource users
- Replicate the social science representation on the SAT as well as the basic approach. Do not develop an analytical framework for socioeconomics

- External peer review would follow the same approach, with some reviews of specific products after their completion

Option B-2: Make specific improvements to the central coast approach based on advice from experts and stakeholder input, subject to time and budget constraints, conditions in the next study region, and other factors. Explicitly clarify the role of socioeconomic information in MPA network component design, including the acceptability of potential tradeoffs with biophysical benefits. Do not commit resources to developing an analytical framework or modifying the Master Plan Framework. The following is a list of potential products, with details about specific approaches and methodologies, listed in descending order of anticipated support from experts based on interviews for this report.

- **Product:** A comprehensive accounting of socioeconomic activity in the study region that extends beyond commercial fishing to include the value of recreational fishing and all non-consumptive uses, and perhaps cultural and spiritual uses as well. *Anticipated expert support: Broad. For a number of experts this information provides the essential foundation for MPA decision making. There are different views about specific elements and methodologies (see below).*
 - Describe all recreational fishing activity—charter, private, and shore—using existing state survey data, a random telephone survey, and location-specific interviews. Use focus groups and stakeholder input to validate and add detail about high-value areas. Focus on spatial information and intensity of use. *Anticipated expert support: Broad, based on expert responses to online survey.*³⁴
 - Describe all non-consumptive activity using survey data, a random telephone survey, and location-specific interviews. Use focus groups and stakeholder input to validate and add detail about high-value areas. Focus on spatial information and intensity of use. *Anticipated expert support: Broad, based on expert responses to online survey.*
 - Describe commercial fishing activity using an enhanced interview methodology that reflects improvements identified by Ecotrust, the Wilen review, and the California Fisheries Coalition review. *Anticipated expert support: Broad, with potential for differences about methodology.*
 - Describe the *total socioeconomic value* of activity in the study region, attempting to capture direct value as well as bequest or existence values. For example, include value added by fish processors, and account for value created by crew members and businesses associated with non-consumptive activities such as diving and kayaking. *Anticipated expert support: Limited, in part due to methodology issues, in part due to lack of broad agreement on significance for MPA network design.*
- **Product:** An estimate of first-order (or direct) socioeconomic effects that could be used to compare MPA network component alternatives. If credible and feasible, better

³⁴ Ecotrust used CRFS skiff fishery data for rockfish and salmon from 2004 to estimate the relative effects of proposed MPA packages on the Central Coast recreational fishery. The analysis covered fishing area affected and maximum number of trips affected. See “Summary of potential impacts of MPA packages 1, 2R, 3R, P, and Commission Preferred on commercial and recreational fisheries in the Central Coast study region,” draft version, August 28, 2006 (Table 3)

estimate likely commercial fishing impacts, e.g., more precision than maximum potential impact that assumes complete loss of fishing value. *Anticipated expert support: Broad. Experts differ about the scope of this estimate, the appropriate methodologies, and the significance of non-consumptive values, but appear to agree generally such an estimate is desirable and feasible. There appear to be accepted economic methods to estimate the value of non-consumptive activities assuming data are available.*

- **Product:** An estimate of second-order (or indirect) socioeconomic effects associated with MPA network alternatives that could be used to compare MPA network alternatives. *Anticipated expert support: Limited. There are important differences about methodology, with some experts endorsing the use of standard multipliers and others questioning assumptions built into multipliers and instead endorsing more robust tools such as surveys and interviews to build a picture with more depth (i.e., how is all the value associated with a fish actually distributed in a coastal economy?). There also are different views about this product’s relevance to MPA design.*
- **Product:** An estimate of third-order socioeconomic effects (possibly combined with second-order effects, or possibly as part of a total economic effects analysis). *Anticipated expert support: Limited. Experts are divided about methodologies and the reliability of results, as well as about relevance for MPA network design. Some point out that the Legislature’s action in adopting the MLPA was a clear statement about the relative importance of existence-type values associated with MPAs.*

Option B-3: Convene a group of experts to develop an analytical model for socioeconomics, and make decisions about socioeconomics consistent with the model. Look for incremental progress and contribution to actual decision making, and establish a realistic schedule. Update the Framework to incorporate the analytical framework. Generate a tool, possibly as simple as a spreadsheet, for stakeholders and others to use in designing and evaluating MPA network component alternatives. Agree on specific products from Option B-2 or modifications that are consistent with the expert framework.

Analysis: Decision B

	Option B-1: Continue Central Coast Project approach to socioeconomics for next study region	Option B-2: Make discrete modifications to central coast process based on expert and stakeholder input	Option B-3: Task experts with developing a socioeconomic framework and adopt modifications based on that framework
<i>Satisfies requirements of MLPA, CEQA, and CAPA</i>	<ul style="list-style-type: none"> ▪ Yes ▪ An authoritative legal opinion could raise questions if it established minimum requirements not addressed by this approach ▪ Potential for future legal challenge unknown 	<ul style="list-style-type: none"> ▪ Likely ▪ An authoritative legal opinion could influence decision making ▪ Potential for future legal challenge unknown 	<ul style="list-style-type: none"> ▪ Likely ▪ An authoritative legal opinion could influence decision making ▪ Potential for future legal challenge unknown
<i>Usefulness to the</i>	<ul style="list-style-type: none"> ▪ This approach is familiar to the Commission 	<ul style="list-style-type: none"> ▪ This option likely would improve the picture of 	<ul style="list-style-type: none"> ▪ Broad technical agreement on a basic

	Option B-1: Continue Central Coast Project approach to socioeconomics for next study region	Option B-2: Make discrete modifications to central coast process based on expert and stakeholder input	Option B-3: Task experts with developing a socioeconomic framework and adopt modifications based on that framework
<i>Commission</i>	<ul style="list-style-type: none"> ▪ Improving access to information for stakeholders should improve MPA design process and reduce overall criticism somewhat ▪ Criticism from some stakeholders and experts over incomplete picture of study region activity and economic effects of MPA designation likely to continue ▪ Commissioners are likely to experience similar information gaps and unanswered questions about socioeconomic effects in making a final decision on a preferred MPA network alternative 	<p>economic activity, and the effects of MPA network component alternatives on that activity, for the Commission’s decision making</p> <ul style="list-style-type: none"> ▪ This option has the potential to reduce stakeholder criticism by presenting a more complete socioeconomic accounting ▪ The Commission would face decisions about which products to adopt ▪ Broad agreement among experts is likely for some products, but technical disagreements are to be expected and complete consensus is unlikely ▪ A clarifying statement from the Commission about the role of socioeconomic information in MPA network component design could be difficult to develop, and would stimulate significant public attention and input ▪ Making choices without a clear analytical framework may contribute to controversy 	<p>analytical approach for MLPA socioeconomics, coupled with a clear statement from the Commission about the role of socioeconomics overall, could significantly reduce controversy for decision making by the Commission</p> <ul style="list-style-type: none"> ▪ While some stakeholders might remain dissatisfied, it is likely that overall stakeholder conflict over socioeconomics would be reduced ▪ The critical challenge would be organizing and implementing a process for developing a robust analytical framework on schedule to support stakeholder decision making ▪ There likely would be conflict associated with the Commission’s deliberations ▪ This option may require a legal opinion, or a clear Commission statement, as described in Decision A above
<i>Usefulness to stakeholders</i>	<ul style="list-style-type: none"> ▪ Improving access to information for stakeholders should improve overall MPA design process ▪ Stakeholders will lack full picture of economic activity in study region 	<ul style="list-style-type: none"> ▪ Subject to timing [below] stakeholders are likely to benefit from broadly accepted modifications that improve understanding of socioeconomic activity and effects ▪ Communication with 	<ul style="list-style-type: none"> ▪ A framework would provide an overall approach for decisions about data gathering and analysis, as well as a tool for comparing effects of different MPA alternatives

	<p>Option B-1: Continue Central Coast Project approach to socioeconomics for next study region</p>	<p>Option B-2: Make discrete modifications to central coast process based on expert and stakeholder input</p>	<p>Option B-3: Task experts with developing a socioeconomic framework and adopt modifications based on that framework</p>
		<p>stakeholders about technical modifications is critical to reduce dissatisfaction with the output</p> <ul style="list-style-type: none"> ▪ Lack of a clear analytical framework could lead to controversy about significance of different analyses ▪ Enhanced peer review process should reduce controversy 	<ul style="list-style-type: none"> ▪ This information potentially would be useful to stakeholders ▪ Potential to reduce stakeholder conflict about MPA data
<p><i>Availability in timely and cost-effective manner</i></p>	<ul style="list-style-type: none"> ▪ Time estimate to gather data for commercial fisheries: 6-9 months minimum (experts suggest longer than for central coast, which was highly compressed) ▪ If similar to Central Coast Project budget: "\$650,000-\$700,000 including CEQA 	<ul style="list-style-type: none"> ▪ Time estimate: 6-9 months minimum from time of contracting for survey methodologies ▪ Essential to coordinate with stakeholder process ▪ Enhanced peer review may require additional time ▪ Cost estimates: Unknown 	<ul style="list-style-type: none"> ▪ Additional time and cost required for framework development will depend on process ▪ Other time and cost estimates are similar to Option B-2

Decision C: Address the role of the California Fish and Game Commission in decision making about the approach to socioeconomics in the next MLPA study region. There are specific “lessons learned” recommendations to strengthen the Commission’s relationship with the BRTF and other MOU signatories. The outcome of discussions about these recommendations will directly affect the way the Commission and other entities oversee the approach to socioeconomics in the next study region. The basic options for the Commission are (C-1) proactively adopt principles and guidelines to shape decision making for the next study area, (C-2) follow the same basic approach as the Central Coast Project process by maintaining distance, or (C-3) take a more active and collaborative role in decision making during the next study region. This set of options is directly linked to the Commission’s substantive choice for Decision B, above.

Option C-1: Adopt a set of principles to guide socioeconomic decision making for the next study region, on a schedule that allows them to be used by the BRTF and stakeholders. This approach would be coordinated with a Commission decision about seeking a legal opinion on the role of socioeconomic information under the MLPA (Decision A). A legal opinion would serve as the foundation for a set of specific principles regarding the role of socioeconomics in MPA network component design and evaluation. The Commission’s approach also would depend on its decision about Option B-3, development of an analytical framework for socioeconomics. If the Commission requests development of a framework, any statement of principles and guidelines would need to be consistent with that framework. One important question would be whether to modify the Framework (or draft Master Plan) to serve as common reference for future study regions.

Option C-2: Do not proactively adopt socioeconomic guidelines and principles. Instead, follow the same basic approach as the Central Coast Project process, maintaining separation from policy issues and relying primarily on the BRTF to supervise the MPA network design process and set policy direction using its judgment and interpretation of the MLPA and other relevant law. Meet with the BRTF at the beginning of the next study region to confirm roles, responsibilities, and expectations, and then once during that process to receive a progress report. Rely on the BRTF’s decisions and recommendations to resolve socioeconomic issues during the process of designing MPA network component alternatives and identifying a preferred alternative. Individual commissioners, or possibly the Marine Committee, would have the option to attend various meetings for the next study region consistent with legal guidelines. Allow the public to comment to the Commission on socioeconomic issues consistent with the Commission’s rules but explicitly direct the public to work with the BRTF on these issues. The BRTF could reach its own decision to pursue development of a socioeconomics analytical framework, and the Commission could rely on the results of this effort for its decision making. This choice would be an immediate priority for the BRTF and Commission, as it would impact development of information for the stakeholder effort such as the regional profile and specific information about activities in the study region. Another important choice would be whether the BRTF proposed modifications to the Framework for deliberation and adoption by the Commission as a way of addressing socioeconomics.

Option C-3: Do not proactively adopt socioeconomic guidelines and principles. Take an active role in policy formulation for the next study region by meeting at least quarterly with the BRTF to discuss key issues and proposed approaches, and potentially to offer individual views or direction as a Commission. Avoid assuming *de facto* supervision of the Initiative process. The Marine Committee would regularly attend BRTF meetings as well as stakeholder meetings. Work with the BRTF and staff to frame key socioeconomic issues, and collaboratively develop an approach for the next study region that could be driven by discrete issues, by design of an analytical framework, or by a collaborative revision to the Framework. The key difference between this option and C-2 is the increased intensity of the Commission’s engagement. One variation would be for the BRTF to identify a Subcommittee that would meet occasionally with the Commission’s Marine Subcommittee to discuss policy issues and develop joint strategies. The Commission could request formal meetings with the BRTF based on reports from the Marine Subcommittee.

Analysis: Decision C

	Option C-1: Proactively adopt guidelines for socioeconomics and oversee implementation by the BRTF and stakeholders	Option C-2: Continue Central Coast Project approach with BRTF having primary responsibility for socioeconomic policy development	Option C-3: Engage frequently with BRTF and MOU parties, and collaborate on development of socioeconomic policy as issues arise
<i>Satisfies requirements of MLPA, CEQA, and CAPA</i>	<ul style="list-style-type: none"> ▪ Yes, but depends on substance of Commission’s decision 	<ul style="list-style-type: none"> ▪ Yes 	<ul style="list-style-type: none"> ▪ Yes
<i>Usefulness to the Commission</i>	<ul style="list-style-type: none"> ▪ This option could significantly reduce conflict over socioeconomics in the next study region once agreement is reached ▪ The key challenge would be developing Commission agreement on guidelines and principles specific enough to be useful, within a reasonable time frame ▪ This step could incorporate development of a basic analytical framework for the Initiative (Option B-3), or seek expert recommendations on basic principles without development of a 	<ul style="list-style-type: none"> ▪ This option is familiar to the Commission and, potentially, to any returning BRTF members and stakeholders ▪ The Commission potentially would maintain flexibility to make its own decision by engaging with the BRTF and others only on a limited basis. In reality this approach could limit flexibility to modify a basic policy choice if significant time has passed ▪ The commissioners would have only limited 	<ul style="list-style-type: none"> ▪ This option would promote continuity within the Commission on MLPA issues, and potentially better alignment with the BRTF ▪ There is a risk of losing the benefit of the BRTF if the Commission seeks a supervisory role ▪ The Commission’s practical flexibility to significantly change the BRTF’s recommendations could be reduced

	<p>Option C-1: Proactively adopt guidelines for socioeconomics and oversee implementation by the BRTF and stakeholders</p>	<p>Option C-2: Continue Central Coast Project approach with BRTF having primary responsibility for socioeconomic policy development</p>	<p>Option C-3: Engage frequently with BRTF and MOU parties, and collaborate on development of socioeconomic policy as issues arise</p>
	<p>framework</p> <ul style="list-style-type: none"> ▪ A significant lack of expert consensus could present challenges ▪ There is potential for this approach to delay the schedule for the next study region ▪ There is a potential for a heightened period of controversy while the Commission makes its decision 	<p>information about progress in the next study region, and limited continuity.</p>	
<p><i>Usefulness to stakeholders</i></p>	<ul style="list-style-type: none"> ▪ A clear set of guidelines, perhaps accompanied by an analytical framework, ultimately would reduce time and resources spent on disagreements and promote better decision making by stakeholders about MPA network alternatives 	<ul style="list-style-type: none"> ▪ This approach carries uncertainty for stakeholders about specific decisions on socioeconomics ▪ There is greater potential for stakeholders to devote resources to arguing about socioeconomics ▪ Stakeholder perceptions about the potential to sidestep the BRTF and focus on Commission will be a significant factor and are difficult to predict at this time 	<ul style="list-style-type: none"> ▪ This approach also carries uncertainty for stakeholders about specific decisions on socioeconomics ▪ There is additional potential for conflict if the Commission and BRTF find common ground elusive
<p><i>Availability in timely and cost-effective manner</i></p>	<ul style="list-style-type: none"> ▪ Difficult to estimate time reliably ▪ Propose 60-90 days for experts to develop a consensus recommendation on guidelines, longer if agreement on a framework is desired, primarily due to availability ▪ Experts likely will require compensation regardless of 	<ul style="list-style-type: none"> ▪ Time: no significant impact on schedule ▪ Cost: no significant impact on cost 	<ul style="list-style-type: none"> ▪ This option would require increased Commission and staff time and budget for MLPA issues

	<p>Option C-1: Proactively adopt guidelines for socioeconomics and oversee implementation by the BRTF and stakeholders</p>	<p>Option C-2: Continue Central Coast Project approach with BRTF having primary responsibility for socioeconomic policy development</p>	<p>Option C-3: Engage frequently with BRTF and MOU parties, and collaborate on development of socioeconomic policy as issues arise</p>
	<p>the specific approach</p> <ul style="list-style-type: none"> ▪ Cost: \$50,000 		

Information Sources

Online survey and telephone interviews

Mary Bergen, *California Department of Fish and Game*
Elizabeth Chornesky, *consultant*
Christopher Costello, *University of California, Santa Barbara, Bren School of Environmental Science and Management*
Chris LaFranchi, *Natural Equity*
Linwood Pendleton, *University of California, Los Angeles*
Caroline Pomeroy, *California Sea Grant Cooperative Extension Program*
Jim Sanchirico, *Resources for the Future*
Astrid Scholz, *Ecotrust*
James Wilen, *University of California, Davis*

State Statutes

Marine Life Protection Act

Initiative and Agency Documents

MLPA Master Plan Framework, as adopted by the Fish and Game Commission, August 22, 2005

MLPA Draft Master Plan for MPAs, submitted by the California Department of Fish and Game to the California Fish and Game Commission, July 21, 2006

MLPA Regional Profile of the Central Coast Study Region (Pigeon Point to Point Conception, CA), September 19, 2005 (v.3.0)

“MLPA Central Coast Project, Amended Goals and Objectives Package, Amended by the Blue Ribbon Task Force,” dated November 30, 2005

SAT meeting summaries

“Lessons Learned in the MLPA Initiative,” memorandum from Phil Isenberg, BRTF Chair, to Mike Chrisman, L. Ryan Broddrick, and W. John Schmidt, October 17, 2006

“Socioeconomic Considerations in Developing Alternative Network Components for a Network of Marine Protected Areas Along the Central Coast,” January 13, 2006, memorandum to the BRTF from Initiative staff.

“Summary of potential impacts of the February ’06 proposed MPA packages on commercial and recreational fisheries in the central coast study region,” prepared by Astrid Scholz, Charles Steinback, and Mike Mertens, Final version, revised 8 March 2006

“Summary of potential impacts of MPA packages 1, 2R, 3R, P, and Commission Preferred on commercial and recreational fisheries in the Central Coast Study Region,” prepared by Astrid Scholz, Charles Steinback, and Mike Mertens, draft version, August 28, 2006

James Wilen and Joshua Abbott, “Estimates of the Maximum Potential Economic Impacts of Marine Protected Area Networks in the Central California Coast,” final report submitted to the California MLPA Initiative in partial fulfillment of Contract #2006-0014M (July 17, 2006)

Wilen and Abbott, “Discussion of Ecotrust Methodology in Commercial Fishing Grounds and their Relative Importance Off the Central Coast of California,” report submitted to the California MLPA Initiative in partial fulfillment of contract number 2006-0014M

Wilen and Abbott: “An Assessment of Ecotrust’s Relative Importance Indicators: Comparisons with Logbook Data for the Market Squid Fishery,” (June 8, 2006).

J. Michael Harty and DeWitt John, *Report on Lessons Learned from the Marine Life Protection Act Initiative*, August 17, 2006

Dr. Jonathan Raab, *Evaluation of the Central Coast Regional Stakeholder Group Process*, August 14, 2006

Other Documents

Bonnie J. McCay, Caroline Pomeroy, Kevin St. Martin, and Barbara L. E. Walker, “Peer Review, Ecotrust MLP AI Products, July 31, 2006 (commissioned by the California Fisheries Coalition)

“A Critique of the MLPA Initiative Process,” prepared by the CCRSG and SIG members representing fishing interests (June 2006)

Web Pages

California Fish and Game Commission [www.fgc.ca.gov]

MLPA Initiative [www.dfg.ca.gov/mrd/mlpa]

Other Publications

Social Science Research Strategy for Marine Protected Areas, National Marine Protected Areas Center, MPA Science Institute, August 2003 (Wahle, Lyons, Barbra, Bunce, Fricke, Nicholson, Orbach, Pomeroy, Recksiek, and Uravitch, authors)

Economic Analysis of Marine Protected Areas: A literature review, EMPAFISH Project, Booklet No. 3, July 2006 (Final revision)

An Economic and Social Evaluation of Implementing the Representative Areas Program by Rezoning the Great Barrier Reef Marine Park, Report on the Revised Zoning Plan, Great Barrier Reef Marine Park Authority (November 2003)

Measuring the Economic and Financial Value of the Great Barrier Reef Marine Park, GBRMPA Published Report No. 84, prepared by Access Economics Pty Limited (June 30, 2005)

ATTACHMENT A

SUMMARY OF SOCIOECONOMIC INFORMATION DEVELOPED FOR THE
CENTRAL COAST PROJECT

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative Central Coast Project

This table summarizes the apparent availability and use of socioeconomic information by participants with different roles and responsibilities for the Central Coast Study Region of the MLPA Initiative. The information is organized as follows:

1. The table utilizes shading to indicate whether specific socioeconomic information was *available* to different sets of people participating in the MLPA Initiative, as well as the words “available” and “unavailable.” The table also indicates the format in which information was available, e.g., document, geographic information system (GIS), Internet mapping system (IMS).
2. A check mark (☑) in a cell indicates clear evidence that specific socioeconomic information was *used* in that phase of the MLPA process. The absence of a check mark indicates either that the information was not used or that the evidence of its use is unclear. Assigning a value to information is beyond the scope of this project.

In addition to generally describing types of information developed during the MLPA Central Coast Project, the table visually presents a picture of the accumulation of information, both descriptive and evaluative, during the roughly two-year project period. This depiction is not intended to suggest that each successive decision maker was obligated to independently review each piece of information as part of their decision making process. The sequential advisory decision steps highlighted smaller sets of specific issues for deliberation in each phase, with the MLPA Blue Ribbon Task Force and Central Coast Regional Stakeholder Group focusing on the broadest number of issues during the initial phase, and the California Fish and Game Commission focusing on a narrower set of issues critical for their decision that reflected the work in previous phases.

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

<i>Category and Description</i>	<i>Format</i>	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
<i>1. MLPA and Other Legal Requirements for Using Socioeconomic Information</i>								
<i>1.a Marine Life Protection Act of 1999</i>	Document available on web	Available <input checked="" type="checkbox"/>	<ul style="list-style-type: none"> ▪ The MLPA statutory language is the ultimate source of authority regarding socioeconomic. ▪ The MLPA’s six goals were the touchstone for the Central Coast study area. ▪ Socioeconomics are not mentioned explicitly in any of the six MLPA goals. In particular, socioeconomic impacts associated with establishing MPA networks are not identified as a statutory goal. ▪ Socioeconomics are mentioned in other parts of the statute. ▪ There is no authoritative legal interpretation of the MLPA that was available to all participants and decision makers for the Central Coast study area, including the Commission. 					
<i>1.b California Environmental Quality Act (CEQA)</i>	Document available on web	Available <input checked="" type="checkbox"/>	<ul style="list-style-type: none"> ▪ Rulemaking by the Commission to establish MPA network components on the Central Coast is subject to CEQA and its requirements regarding socioeconomic, as well as to CAPA. ▪ There is no authoritative legal interpretation of CEQA and CAPA requirements that was available to all participants and decision makers for the Central Coast study area. Various staff 					
<i>1.c California Administrative Procedure Act (CAPA)</i>								

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

<i>Category and Description</i>	<i>Format</i>	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
								<p>provided advice about these requirements, including to the Commission.</p> <ul style="list-style-type: none"> ▪ The Initiative contracted with Jones & Stokes to prepare a CEQA analysis covering socioeconomics [for the Commission's preferred alternative]
2. MLPA Initiative Guidance on Socioeconomics								
<i>2.a MLPA Master Plan Framework</i>	Document; available on web	Available <input checked="" type="checkbox"/>	<ul style="list-style-type: none"> ▪ The Framework was developed iteratively, in multiple draft versions, and was available at various stages of the Initiative. The BRTF adopted the draft Framework in April 2005 after six months of public, Staff and SAT input, and the Commission adopted the Framework in August 2005. ▪ The 2005 Framework is a guide for applying the MLPA. It presents a detailed and methodical process for developing alternative MPA network components. The Framework process served as a key reference for the Central Coast process, which combined some process steps and made other adaptations. ▪ The 2005 Framework addresses the role of socioeconomics in connection with the design of 					

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

<i>Category and Description</i>	<i>Format</i>	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
<p><i>2.b Central Coast Project Regional Goals and Objectives-as amended by the BRTF, November 2005</i></p> <p><i>Goal 5, Objective 1: “Minimize negative socioeconomic impacts and optimize positive socioeconomic impacts for all users, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.”</i></p>	Document available on web	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	<p>MPA network components only procedurally. It also lists socioeconomic criteria for designating Marine Managed Areas in Attachment A to Appendix F, and covers socioeconomics in a suggested outline for Regional Management Plans of MPAs in Appendix K.</p> <ul style="list-style-type: none"> ▪ DFG submitted a draft Master Plan to the Commission in July 2006. The draft addresses the role of socioeconomics in connection with design of MPA network components. <ul style="list-style-type: none"> ▪ The Framework provides for development of Regional Goals and Objectives as part of the overall MPA network design process ▪ The CCRSG negotiated Goals and Objectives, as well as design criteria, that eventually were adopted, with some modifications, by the BRTF and used for decision making ▪ The Goals track those in the MLPA ▪ The Objectives are intended as measures for achieving each Goal but do not track statutory language
<p><i>2.c Briefings and general advice on socioeconomic considerations in developing MPA networks and implementing the MLPA.</i></p>	Briefings and related materials	Available <input checked="" type="checkbox"/>	Available (see Remarks) <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	<ul style="list-style-type: none"> ▪ The role of socioeconomic information was addressed by the BRTF and MLPAI Staff at various points during the Initiative, including: adopting the draft Master Plan Framework,

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

<i>Category and Description</i>	<i>Format</i>	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
								<p>and adopting the final version of objectives for the Regional Goals and Objectives for the Central Coast in September 2005 (see below).</p> <ul style="list-style-type: none"> ▪ Dr. Pendleton briefed the BRTF on socioeconomic issues at the July 11, 2005 meeting. ▪ The CCRSG was formed in June 2005 and addressed socioeconomics at its first four meetings (June, July, August, September). Dr. Scholz attended a work session on behalf of the SAT at the July 7-8, 2005 meeting. A CCRSG work team eventually produced the <i>Community Profile Data Report</i> described below. ▪ MLPA I Staff prepared a summary memorandum for the BRTF dated January 13, 2006 that addressed socioeconomic considerations in developing alternative MPA network components for the Central Coast. ▪ Formal SAT discussions and presentations to the BRTF (such as Dr. Pendleton's), and Staff presentations to the BRTF, on the subject of socioeconomics were available to any CCRSG member attending meetings or participating via the Web. ▪ This cumulative body of information was used by the BRTF in its decision making

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
3. General Socioeconomic Information								
3.a Pendleton, <i>Understanding the Potential Economic Impact of Marine Wildlife Viewing and Whale Watching in CA</i> Version: March 1, 2006	Document	Available <input checked="" type="checkbox"/>	Available (pre-publication version)	Available	Available <input checked="" type="checkbox"/>	Available	Available	Referenced in Regional Profile
3.b Pendleton, <i>Understanding the Potential Economic Value of SCUBA Diving and Snorkeling</i> Version: Draft paper	Document	Available <input checked="" type="checkbox"/>			Available <input checked="" type="checkbox"/>			Provides estimated ranges of market and non-market economic value in CA based on literature survey
3.c Pendleton, <i>Understanding the Potential Economic Value of Marine Recreational Fishing</i> Version: Draft dated January 3, 2006	Document	Available <input checked="" type="checkbox"/>			Available <input checked="" type="checkbox"/>			Provides estimated ranges of market and non-market economic value in CA based on literature survey
3.d Information on harbors, ports, local parks, national parks, and shore types	GIS IMS Available on web	Available	Available	Available	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
4. Central Coast General Socioeconomic Information								
<i>4.a Regional Profile of the Central Coast Study Region</i> Version: 3.0, Sept. 19, 2005 Section 5 covers the “Socioeconomic Setting” (pp. 49-95) in detail.	Document; available on web	Available <input checked="" type="checkbox"/>	Available	The Regional Profile presents a detailed picture of the Central Coast. It includes text, tables, appendices, and maps. The maps do not show commercial fishing locations. Data are from a variety of data sets including National Ocean Economics Program, U.S. Census, CDFG, and counties as well as independent research				
4.b Marine research institutions and monitoring sites in and around CC study region	GIS Regional Profile Available on web	Available <input checked="" type="checkbox"/>	Available	Available	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	
4.c Sturm, <i>Community Profile Data Report</i> , Version: October 2005	Document	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available	Available	Prepared for CCRSG at request of Socioeconomic Work Team. (Kirk Sturm was contractor) Compiles information from local governments in Central Coast study area related to policies associated with marine resources
4.d CCRSG members offered <i>personal knowledge</i> related to ocean-human economic relationship and impacts for the Central Coast	Personal comments	Available <input checked="" type="checkbox"/>	<ul style="list-style-type: none"> ▪ This personal knowledge component reflects MLPA language ▪ Personal knowledge was sometimes translated into various data layers and maps, such as for scuba diving 					

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

<i>Category and Description</i>	<i>Format</i>	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
								<ul style="list-style-type: none"> Personal knowledge also was at the heart of EcoTrust's project to identify the relative importance of commercial fishing grounds (see next section)
5. Central Coast commercial and recreational fisheries and other consumptive uses								
<i>5.a Regional Profile of the Central Coast Study Region</i> Version: 3.0, Sept. 19, 2005	Document; available on web	Available	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	Available	The Regional Profile contained extensive fisheries information, particularly for Monterey and Morro Bay fisheries, and maps depicting DFG survey information.
5.b Commercial Passenger Fishing Vessel (CPFV) effort survey data (1987-98)	GIS IMS Available on web	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available <input checked="" type="checkbox"/>	Available	DFG provided these data
5.c CA Recreational Fishing Survey effort (5 fisheries) (2004)	GIS IMS Available on web	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available <input checked="" type="checkbox"/>	Available	DFG provided these data
5.d Spot Prawn and Squid fishery data from trap, trawl, and tonnage logs	GIS IMS Available on web	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available <input checked="" type="checkbox"/>	Available	DFG provided these data
5.e Dungeness crab and purse seine fishery areas	GIS	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available <input checked="" type="checkbox"/>	Available	

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
5.f Ecotrust survey data on fisheries and fishers per block, fishery hot spots, relative importance of fishing grounds	GIS (multiple layers)		Available (see Remarks)	Available <input checked="" type="checkbox"/>	CCRSG had partial access to Ecotrust information in designing MPA packages due to time constraints and confidentiality issues. They were unable to view maps. The first time aggregated Ecotrust survey results were made available publicly was November 2005.			
5.g Consumptive dive areas and sites	GIS IMS Available on web	Available	Available <input checked="" type="checkbox"/>	Available	Compiled using Oceanmap and original data from field interviews; also GIS layers from CCRSG member direct input.			
5.h Pomeroy, <i>Socioeconomics of Moss Landing Commercial Fishing Industry</i> , Version: 2003	Document	Available	Available <input checked="" type="checkbox"/>	Available	Available	Available	Available	Cited in Regional Profile
5.i Kelp Bed Administration	GIS Available on web	Available	Available	Available	Available	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Included in Regional Profile

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Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
6. Central Coast non-consumptive uses								
6.a Kayaking areas, non-consumptive dive areas, recreational and technical dive sites (REEF), surfing areas	GIS IMS Regional Profile	Available	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	Compiled using Oceanmap and field interviews, or from seafloor maps
6.b LaFranchi, <i>Spatial Patterns of Non-consumptive Use on the CA Central Coast</i> Version: Sept. 2005	Document	Available <input checked="" type="checkbox"/>	Available (limited)	Available	Available <input checked="" type="checkbox"/>	Available	Available	Presents results of limited in-person surveys along Central Coast for five user groups Survey limitations prevent extrapolation to all users in Central Coast study region Referenced in Regional Profile

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Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
7. Central Coast Socioeconomic Impacts or Evaluation								
7.a MLPA I Staff and SAT, Revised Summary of Staff Evaluation of Goal 3 and SAT Evaluation of Replication Version: March 7, 2006	Document	Available <input checked="" type="checkbox"/>	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	A joint product of the MLPA I Staff and the SAT evaluates the potential for different proposed MPA packages to achieve Goal 3, including "improving recreational opportunities" Analyzes packages 1, 2, 3, AC, and S
7.b Ecotrust, Maximum Relative Impacts Analysis of MPA Packages Version: March 8, 2006	Document	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Ecotrust study was not designed as a social or economic impact analysis, but rather as a method for identifying "high value or use" fishing grounds
7.c Ecotrust, Commercial fishing grounds and their relative importance off the Central Coast of CA, Version: April 20, 2006	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Explains methodology for gathering data to analyze relative importance of fishing grounds and estimate maximum first-order impacts of proposed MPAs
7.d Ecotrust, Maximum Relative Impacts Analysis of MPA Packages Version: June 15, 2006	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Analyzes packages 1, 2R, 3R, and P

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Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
7.e Ecotrust, <i>Summary of potential impacts of MPA packages 1, 2R, 3R, P and "Commission Preferred" on commercial and recreational fisheries in the Central Coast Study Region</i> Draft Version: August 28, 2006	Document	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Adds analysis of Commission's preferred alternative
7.f Wilen and Abbott, <i>Estimates of Maximum Potential Economic Impacts of Marine Reserves</i> Version: July 17, 2006	Document	Unavailable	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Analyzes packages 1, 2R, 3R, P Analysis of Ecotrust data and other literature to estimate economic impacts of creating MPA networks
7.g DFG, <i>Net Value of Stated Importance of Total Fishing Grounds Affected for Select Fisheries</i> Version: August 2006 (prep'd for FGC)	Document	Unavailable	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Analyzes packages 1, 2R, 3R, P Presents estimated economic (\$) impacts by sub-region and fishery based on Wilen and Ecotrust data Questions raised about accuracy of estimated impacts for at least some fisheries
8. Other Information								
8.a Agardy, <i>Ocean Zoning Review</i> Version: Undated	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available		Literature review
8.b Agardy, <i>Understanding Displacement</i> Version: Undated	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available		Literature review Discusses challenges of accurately measuring fishery displacement resulting from MPA

Attachment A: Apparent Availability and Use of Socioeconomic Information for MLPA Initiative-Central Coast Project

Category and Description	Format	SAT	CCRSG	BRTF	I Staff	DFG	FGC	Remarks
9. Peer Reviews and External Critiques of Socioeconomic Evaluation or Impact Analysis								
9.a Wilen, <i>An Assessment of Ecotrust's Relative Importance Indicators: Comparisons with Logbook Data for the Market Squid Fishery</i> , Version: June 8, 2006	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	
9.b Wilen and Abbott, <i>Discussion of Ecotrust Methodology in 'Commercial Fishing Grounds and Their Relative Importance off the Central Coast of California'</i> Version: NK	Document	Unavailable	Unavailable	Unavailable	Available <input checked="" type="checkbox"/>	Available <input checked="" type="checkbox"/>	Available	
9.c McKay, Pomeroy, St. Martin, and Walker, <i>Peer Review, Ecotrust MLPAI Products</i> Version: July 31, 2006	Document	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Available	This is an external critique of Ecotrust's methodology prepared for the California Fisheries Coalition (CFC)
9.d Scholz, <i>Response to CFC Review of Ecotrust's MLPAI Products</i> , Version: September 22, 2006	Document	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	This is just what its title denotes-a response to specific points in the CFC critique

ATTACHMENT B

STAFF MEMORANDUM TO BRTF DESCRIBING MLPA REQUIREMENTS
FOR SOCIOECONOMICS



California Marine Life Protection Act Initiative

c/o California Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

To: MLPA Blue Ribbon Task Force
From: MLPA Initiative Staff
Date: January 13, 2006

**Subject: SOCIOECONOMIC CONSIDERATIONS IN DEVELOPING ALTERNATIVE
NETWORK COMPONENTS FOR A NETWORK OF MARINE PROTECTED
AREAS ALONG THE CENTRAL COAST**

Summary

The Marine Life Protection Act (MLPA) gives precedence to ecosystem integrity and habitat protection goals in designing a network of MPAs. Consideration of socioeconomic factors in the act includes the goal of attention to species of economic value, participation by interested parties and local communities, and development of a siting plan for protected areas that considers economic information to the extent possible while achieving goals of the act. Best readily available science and the knowledge of participants is required for decision making; there is no expectation of new data collection or analyses. While the MLPA is not excluded from the requirements of the California Environmental Quality Act (CEQA), additional review under CEQA is not necessary when the Fish and Game Commission adopts a master plan or a program based on that plan.

To date, the Initiative process has complied with requirements of the MLPA to consider socioeconomic factors and gone beyond those requirements to collect and analyze additional socioeconomic information. The California Department of Fish and Game has stated it will undertake an analysis of the maximum anticipated economic impact of the preferred alternative it proposes to the California Fish and Game Commission. Unlike the National Environmental Policy Act, CEQA does not require analysis of economic impacts unless they have a significant indirect environmental impact. However, the promulgation of implementing regulations by the commission would require an economic analysis.

Socio economic considerations in the MLPA

The MLPA includes few references to socioeconomic or economic factors, shown in bold below:

2853. (b) To improve the design and management of that system, the commission, pursuant to Section 2859, shall adopt a Marine Life Protection Program, which shall have all of the following goals:
- (2) To help sustain, conserve, and protect marine life populations, **including those of economic value**, and rebuild those that are depleted.

2855. (b) (1) ... the department shall convene a master plan team to advise and assist in the preparation of the master plan...

(3) The team shall be composed of the following individuals:

(B) Five to seven members who shall be scientists, one of whom **may have expertise in the economics and culture** of California coastal communities.

(c) The department and team, in carrying out this chapter, **shall take into account relevant information from local communities**, and **shall solicit comments** and advice for the master plan from interested parties on issues including, but not necessarily limited to, each of the following:

(2) **Socioeconomic** and environmental **impacts** of various alternatives.

2857. (a) ... The department and team shall develop a preferred siting alternative that incorporates information and views provided by people who live in the area and other interested parties, **including economic information, to the extent possible** while maintaining consistency with the goals of Section 2853 and guidelines in subdivision (c) of this section.

(d) The department and team, in developing the preferred siting alternative, shall take into account the **existence and location of commercial kelp beds**.

As stated above, the Fish and Game Commission's designation of MPAs does not require an additional CEQA analysis once a master plan and program based on that plan are adopted:

Section 2859 (b). ..The commission's adoption of the plan and a program based on the plan **shall not trigger additional review under the California Environmental Quality Act** (Division 13 (commencing with Section 21000) of the Public Resources Code).

Information requirements for decision-making in the MLPA

Importantly, the MLPA anticipates decision-making based on readily available, up-to-date science and provides no suggestions of deferring action for additional data collection or analyses. The relevant phrases are again in bold:

2855. (a) The commission shall adopt a master plan that guides the adoption and implementation of the Marine Life Protection Program adopted pursuant to Section 2853 and decisions regarding the siting of new MPAs and major modifications of existing MPAs. The plan shall be based on the **best readily available science**.

2856. (C) Recommendations to augment or modify the guidelines in subdivision (c) of Section 2857, if necessary to ensure that the guidelines reflect **the most up-to-date science**, including, for example, recommendations regarding the minimum size of individual marine life reserves needed to accomplish the various goals set forth in Section 2853.

Incorporation of socio economic factors in the MLPA Initiative

Consistent with the MLPA, socioeconomic information has been brought into the development of proposed MPA packages through:

- a. Knowledge of members of the MLPA Central Coast Regional Stakeholder Group (CCRSG),
- b. Compilation of existing information into the MLPA Central Coast Regional Profile, and
- c. Opportunities for public participation, including posting documents on the web for comment and public comment periods at MLPA Blue Ribbon Task Force, CCRSG and Master Plan Science Advisory Team (SAT) meetings.

Additional socioeconomic information regarding areas of high value uses was collected from interviews with:

- a. A purposive sample of commercial fishermen from 17 fisheries providing GIS data layers and maps available to CCRSG members and the SAT,
- b. Selected non consumptive users (e.g., divers, kayakers) reported in the Central Coast Regional Profile and also related GIS layers, and
- c. Central coast recreational fishing effort data for commercial passenger fishing vessels (CPFV) and private skiffs, based on surveys by the Department of Fish and Game and the California Recreational Fisheries Survey, were assembled and made available to the SAT.

These data are only spatial, that is they define areas of high value, but do not assign a monetary measure to the value of uses in locations. While estimating monetary values of use is possible for some activities, especially commercial fishing, it is not possible to develop equivalent monetary measures for other valued uses, especially at the fine spatial resolutions needed for decisions regarding marine protected areas. To provide whatever information could be extracted from existing literature on the value of non consumptive uses, three reviews of existing literature were commissioned. They addressed understanding the potential economic value of (a) marine wildlife and whale watching, (b) SUBA diving and snorkeling, and (c) marine recreational fishing (Pendleton and Rooke, 2005-2006).

Additionally, public documents (e.g., general plans) from coastal cities and counties in the study area were analyzed and selected officials of those jurisdictions interviewed to identify local public policies related to marine resources. This analysis and supporting official documents was available to the CCRSG in hard copy (Sturm 2005)

The SAT evaluations of proposed packages being provided to the BRTF in 2006 will include:

- a. Analyses of the proximity of proposed MPAs to population centers to proposed MPAs, and
- b. Estimation of the maximum possible impacts on commercial and recreational fisheries from more restrictive regulations associated with proposed MPAs.

A final contribution of socioeconomic data and analysis is anticipated after the BRTF completes its role in forwarding alternative package of MPAs to the Department of Fish and Game. The department plans to contract for analysis of maximum anticipated economic impact of a preferred alternative for use in deliberations of the California Fish and Game Commission.