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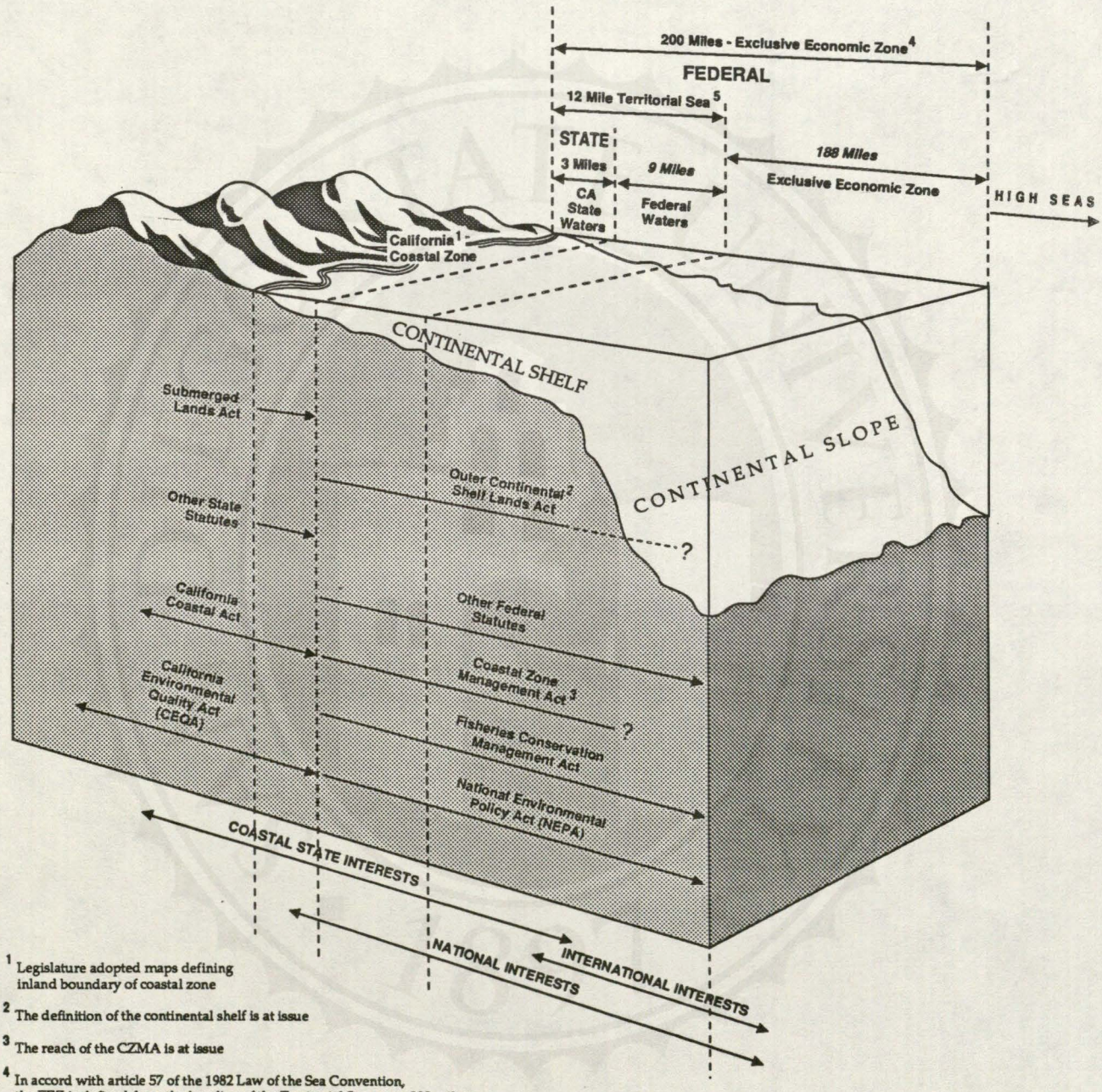
CALIFORNIA OCEAN RESOURCES MANAGEMENT (CORM) PROGRAM

DRAFT STUDY PLAN

July 1990

U.S. Exclusive Economic Zone (EEZ)

Legal Jurisdictions Offshore California



[1] Legislature adopted maps defining inland boundary of coastal zone

[2] The definition of the continental shelf is at issue

[3] The reach of the CZMA is at issue

[4] In accord with article 57 of the 1982 Law of the Sea Convention, the EEZ is defined from the baseline of the Territorial Sea out to 200 miles. California's State Waters extend to three miles offshore.

[5] By Proclamation in 1988, the U.S. Territorial Sea was extended from three to twelve miles offshore.

CA 1990

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*Note: The term "corm" besides being an acronym for this Program is a botanical term for the underground stem used for storing water of certain plants.

INTRODUCTION TO THE CORM PROGRAM

AB 2000 (Chapter 1215, Statutes of 1989), authored by Assemblyman Sam Farr, was signed by Governor Deukmejian on August 1, 1989. AB 2000 establishes the California Ocean Resources Management (CORM) Program, constitutes a Task Force and Advisory Committee, and requires the Task Force to deliver a report with recommendations on California's management of ocean uses to the Governor and Legislature by January 1, 1993. AB 2000 designates the Secretary of Environmental Affairs as the Chair of the Task Force, and prescribes that the Secretary provide all staff support to the Task Force.

Why has California initiated this Program at this time? Why is it important that the Task Force, Advisory Committee, and the public participate fully and that the Report and Recommendations be delivered on time to the Governor and the Legislature? In order to provide an introductory framework to this Study Plan, the following is a broad summary of some relevant ocean events.

By Proclamation dated March 10, 1983, President Reagan claimed U.S. sovereign rights and jurisdiction over the United States' 200-mile Exclusive Economic Zone (EEZ). The U.S. became the 59th nation to declare such a zone, which includes 2.3 million square miles offshore as U.S. sovereign territory. The Proclamation includes the area offshore California out to 200 nautical miles (n.m.).

By Proclamation dated December 27, 1988, President Reagan extended the U.S. territorial sea to 12 nautical miles in accordance with international law as reflected in the 1982 United Nations Convention on the Law of the Sea. The Proclamation was justified on the basis of national security, includes all U.S. Territories and Possessions, and confirms international rights of innocent passage and overflight, and transit passage through international straits. The Proclamation includes the area offshore California out to 12 n.m.

The EEZ is referred to often as the 200-mile zone or the 200-mile EEZ. It should be understood that the 200-mile reference is to the maximum extension from a state's coastline allowed by the 1982 Law of the Sea Treaty. In the case of the United States, therefore, federal EEZ jurisdiction includes the 188 n.m. contiguous to its now 12 n.m. territorial sea. The first 3 miles of the territorial sea offshore California remain State waters.

Because 197 n.m. of California's adjacent 200-mile EEZ is federal waters, it is helpful to place the State's ocean activities in the context of national ocean policy, which in turn contributes to an evolving international law of the sea. Following World War II, new and improved technological capabilities created new and fostered traditional ocean uses. The levels of ocean use increased to a point at which scarcity problems arose over certain resources, and conflicts arose over certain uses and over impacts from various uses. As particular ocean uses increased in

scarcity value, governments, including the U.S., made claims to various jurisdictions and resources.

As a result, four law of the sea treaties were negotiated in 1958 by the international community, all of which focussed on jurisdiction. These included conventions on fisheries, the continental shelf, the territorial sea, and the high seas. These conventions were followed by the Third United Nations Conference on the Law of the Sea (UNCLOS III, 1973-1981), which opened for Treaty signatures in 1982. Among other things, the Law of the Sea Treaty provides for national 200-mile Exclusive Economic Zones, and 12-mile Territorial Seas. Though the U.S. has not signed it, the Law of the Sea Treaty is the international law to which the U.S. EEZ and territorial Sea Presidential Proclamations refer, and the international law on which the U.S. relies as comprising existing maritime law and practice for traditional ocean uses.

Prior to the U.S. EEZ Proclamation, therefore, the waters beyond the U.S. territorial sea (then 3 nautical miles seaward) were international high seas. There were exceptions to this international jurisdiction, however, for which Congress passed various so-called "single purpose" laws, a process consonant with emerging international law. These "single purpose" laws, such as the Outer Continental Lands Act (OCSLA), and the Fisheries Conservation Management Act (FCMA), provide specific U.S. federal agencies with management jurisdiction over certain uses beyond state waters and the territorial sea, uses such as oil and gas and fisheries. These use specific laws are complemented by the National Environmental Policy Act (NEPA) of 1969 as amended, and its regulations governing major actions requiring federal approvals. These and other federal statutes and regulations remain in effect, but it is unclear whether and how each is affected by the EEZ and Territorial Sea Proclamations.

In addition, California's State waters are subject to State constitutional provisions, statutes, and programs. The California Coastal Act provides for coastal resources planning and management, and the federal Coastal Zone Management Act provides consistency review of activities in federal waters which directly affect State coastal resources. Additionally, the California Environmental Quality Act and a number of use specific laws and regulations administered by more than 20 State agencies have some focus on State waters activities. As with those for federal waters, it is unclear how State statutes and regulations are affected by the Proclamations.

This evolving situtation is important to California because most of the State's trade, economic, social, technological, environmental and scientific interests extend through federal waters. Of particular importance will be the outcomes of federal management decisions offshore which pertain to other of California's immanent economic and policy interests, and to State goals such as those for domestic energy production, jobs and trade promotion, revenue sharing, and more. Thus, obvious State concerns comprise the review of policies current in State and federal waters off California, and the need to identify and plan for new offshore technologies and uses. For instance, California already is involved extensively with oil and gas development on the outer continental shelf (OCS), and will have to deal with questions of

jurisdiction, technological capacity, and the environmental and socio-economic impacts of evolving deep water oil and gas extraction. Less obvious but equally important concerns include management of resources and uses in the territorial sea and EEZ not currently under statute.

The high seas, EEZ, territorial sea, State waters, and terrestial environments are interdependent systems, and California's efforts to address uses in federal waters should correspond to this fact. Though the California Coastal Act and the Coastal Zone Management Act provide a management regime for California's coastal zone, it has not been considered whether this regime which is focussed substantially on land use planning, is sufficient to the management of territorial sea and EEZ uses. It may be that California's coastal zone regime, or some new regime, or more than one regime is necessary for the most effective management of uses in California's adjacent ocean jurisdictions. Accordingly, it is important to California to cast ocean uses, issues, and jurisdictions in a framework that will facilitate their integration for purposes of evaluation and recommendations.

There is, consequently, a range of uses potentially affected by extended federal jurisdiction and a mix of issues that California must address from various legal and management perspectives. Also, there are a growing number of public and private ocean players who are raising offshore issues to address substantive environmental and conflict-of-use problems, to promote research and development, and to advance socio-economic and political agendas. These efforts demand equal effort to ensure that, taken together, they reflect a synthesis of explicit goals regarding California's adjacent ocean waters.

Additionally, on the national level, Congress, agencies, and interested groups have introduced ocean related legislation, regulations, and initiatives generated by environmental concerns as well as by the federal jurisdictional extensions. These initiatives have been accompanied by some studies of the implications to federal policy and statute of extended jurisdiction. In general, the studies have found need for a comprehensive federal interagency review to determine effects on statutes and federal options for planning and coordination. A number have emphasized the point that coastal states must share with the federal government in the management of and revenues from uses offshore.

There is no doubt that California's interests will be affected by any new federal legislation or management regimes for the EEZ and expanded territorial sea. The CORM Program will be a concerted effort by this State to help set the agenda in a way that best ensures that our interests will be addressed. Through the CORM Program, California will, among other things:

- review our existing ocean uses and management programs,
- explore options to improve our efforts particularly as they will be affected by changes in federal activities,

- o evaluate options to improve coordination among individual management activities, and

- o identify opportunities for cooperative management between federal, regional, State, and local entities.

The CORM Program consists of the CORM Task Force, the CORM Advisory Committee, and the CORM Report and Recommendations. The purpose of the Study Plan is to cast ocean issues, uses, and jurisdictions in a framework that will facilitate their integration for purposes of evaluation for the report and recommendations.

The first part of the Study Plan is this introduction. The second part of the Study Plan is a draft general schedule for the three years of the Program. The third part of the Study Plan is a draft outline of the CORM Report.

DRAFT SCHEDULE FOR THE CORM PROGRAM

DRAFT SCHEDULE FOR THE CORM PROGRAM

1/90 - 5/90 Prepare Draft Study Plan for the Task Force and Advisory Committee

5/2/90 First Task Force Meeting - Sacramento

Purpose: Program Overview
Advisory Committee List
Task Force Members "Ocean Related Activities"

5/11/90 Designation Letters to Advisory Committee

6/14/90 Meeting with other U.S. Coastal State Ocean Program Managers (Washington, Oregon, Hawaii, Mississippi, Florida, Virginia, North Carolina, Maine) - San Francisco

6/28/90 Task Force & Advisory Committee Meeting - Sacramento

Purpose: Program Overview
Discuss Administrative Draft Study Plan
Confirm Subcommittees

7/13/90 Final Comments Due from Task Force and Advisory Committee on Administrative Draft Study Plan

7/20/90 - 9/3/90 Release Draft Study Plan for Public Review with 45 Day Comment Period

8/90 - 12/90 CORM Subcommittee Meetings

10/21/90 Meeting with other U.S. Coastal State Ocean Program Managers at Coastal Society Meeting - San Antonio, Texas

12/90: Have ready drafts of the following:
Inventory of current and potential ocean uses
Inventory of State ocean statutes and programs
Inventory of federal ocean statutes and programs
Inventory of State ocean education, policy, and science programs and activities
Preliminary Bibliography

1991 -

Third Task Force Meeting - Sacramento

Purpose: Review Progress to Date
Re-confirm Subcommittees

1/91 - 6/92: Subcommittee Meetings (to be scheduled)

7/8-12/91: Meeting with other U.S. Coastal State Ocean Program Managers at Coastal Zone Management Conference - Long Beach

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1992 -

6/92 Make draft CORM Report and Recommendations available for public review & comment through SEA (Provide 60 days for comment)

7/92 Hold any public hearings

10/1/92 Task Force meeting - Sacramento

Purpose: Final Review of Draft CORM Report & Recommendations

12/15/92 SEA transmits Final Report to the printer

1/1/93 Task Force transmits Final Report and Recommendations, and Public Comments to the Governor and Legislature

DRAFT OUTLINE OF THE CORM REPORT AND RECOMMENDATIONS

DRAFT OUTLINE OF THE CORM REPORT AND RECOMMENDATIONS

EXECUTIVE SUMMARY AND RECOMMENDATIONS

TABLE OF CONTENTS

INTRODUCTION

SECTION I LEGAL ISSUES A - D

The Chapters and Parts of this Section will evaluate the following set of legal issues:

A. Inventory of International and Federal Laws, Rules, Regulations, Authorities and Programs:

An inclusive source does not exist to refer State ocean managers and users to current international and federal laws, rules, regulations, authorities and programs for ocean uses. This lack of information has become more problematic with the additions to the international and federal legal landscapes of the 1982 Law of the Sea Treaty which the U.S. has not signed, the 1983 Presidential Proclamation on the U.S. EEZ, and the 1988 Presidential Proclamation on the U.S. Territorial Sea. With no corresponding Congressional action, the proclamations in particular have added to the uncertainty and speculation over the legal status of ocean uses. The focus of this inventory will be to list international and federal laws, rules, regulations, authorities, and programs relating to ocean uses that may be affected by the Proclamations, and that may conflict with California's laws, rules, regulations, authorities, or programs. An inventory will help clarify the international and federal legal framework for uses offshore in order to provide a baseline for the analysis required in Issue C.

B. Inventory of State Laws, Rules, Regulations, Authorities, and Programs:

An inclusive source does not exist to refer ocean managers and users to current State laws, rules, regulations, authorities and programs for ocean uses offshore California. As with international and federal law, the omission has become more problematic because of the EEZ and Territorial Sea Proclamations, no corresponding congressional action, and increasing uncertainty surrounding current and potential uses. The focus of this inventory will be to list California laws, rules, regulations, authorities, and programs relating to ocean uses that may be affected by the Proclamations, and that may conflict with other State or federal laws, rules, regulations, authorities; or programs. This inventory will provide a baseline for the analysis required in Issue C.

C. Analysis of Conflicts of State with State and/or International and/or Federal Laws, Rules, Regulations, Authorities and Programs:

Using the inventories prepared as provided in Issues A and B above, the focus of this analysis will be to identify gaps and inconsistencies in State law, and to identify specific sources of current and potential legal conflicts of State with state and/or international and/or federal laws, rules, regulations, authorities and programs. This analysis is necessary in order to clarify California's policy, planning, and management status and options for ocean uses, and to identify options for State/state, regional, federal, and international cooperation.

D. Current and Potential Jurisdictional Disputes:

Federal/State and adjacent state jurisdictional disputes can occur in cases where there is evidence of particularly high resource or use value, or where particularly damaging environmental impacts might occur.

The primary focus of this section will be to address California's legal and management options with respect to the EEZ, and the U.S. territorial sea extension. Though the 1988 Presidential Proclamation stated that the territorial sea extension did not affect U.S. jurisdiction or statutory mandates relating to individual coastal states, this remains subject to debate. Should California attempt to extend its State waters from 3 to 12 nautical miles offshore? What are the legal options for doing so? How this issue is resolved by California and by Congress will have significant consequences for the management of all California's ocean uses.

In addition to the legal options, California must ask associated management questions such as: what are the costs, including opportunity costs, and benefits to California of extending its State waters? Are there associated use and resource costs and benefits? A thorough analysis will require that the relevant subcommittees treat this issue across both legal and management spectrums.

In the meantime, the State must address the management of uses in the whole of its EEZ (see Issue M) and be prepared to evaluate all options before resolving the State waters extension issue.

Though institutional jurisdictional disputes may be or become legal issues, these are listed under management issues since they must be taken into account in current decisionmaking.

CHAPTER 1 EXTRACTIVE OCEAN USES - LIVING MARINE RESOURCES

For each of the legal issues in this Section, this Chapter will evaluate the following uses:

1) Animals - fish, shellfish, mammals, birds, invertebrates
   Industries:
   - Aquaculture/Mariculture: sea ranching fish for stock enhancement, sale, consumption, and research for food, biotechnology, etc.
   - Biotechnology: harvesting fish or their constituents for useful purposes in a controlled environment, e.g. genetic engineering, pharmaceuticals, and industrial compounds
   - Commercial fishing: harvesting fish and shellfish for sale, subsistence or cultural and traditional harvesting
   - Sport fishing: harvesting fish for recreation or personal consumption, subsistence or cultural and traditional harvesting

2) Plants - algae, sea grasses
   Industries:
   - Aquaculture/Mariculture: sea ranching plants for sale, consumption, and research for food, biotechnology etc.
   - Biotechnology: harvesting plants or their constituents for useful purposes in a controlled environment, e.g. genetic engineering, pharmaceuticals, and industrial compounds
   - Commercial harvesting: harvesting plants for sale, subsistence or cultural and traditional harvesting
   - Recreational harvesting: taking plants for recreation or consumption, subsistence or cultural and traditional harvesting

Part 1 State Waters

This Part will evaluate each of the legal issues for each extractive use of living resources in the context of State waters.

Part 2 Territorial Sea

This Part will evaluate each of the legal issues for each extractive use of living resources in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the legal issues for each extractive use of living resources in the context of the Exclusive Economic Zone.

CHAPTER 2 EXTRACTIVE OCEAN USES - NON LIVING MARINE RESOURCES

For each of the legal issues in this Section, this Chapter will evaluate the following uses:

1) Chemicals - extraction from hydrothermal processes and the water column of chemicals and their precipitates

2) Hard minerals - non-organic minerals, e.g. cobalt, gold, manganese, polymetallic sulfides, black sands

3) Oil & Gas

4) Sand & Gravel

5) Water - electrolysis, desalination, diversion for development and erosion control

Part 1 State Waters

This Part will evaluate each of the legal issues for each extractive use of nonliving resources in the context of State waters.

Part 2 Territorial Sea

This Part will evaluate each of the legal issues for each extractive use of nonliving resources in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the legal issues for each extractive use of nonliving resources in the context of the Exclusive Economic Zone.

CHAPTER 3 NON EXTRACTIVE OCEAN USES

For each of the legal issues in this Section, this Chapter will evaluate the following uses:

1) Commercial - Construction of mobile and fixed bases for building and services such as airports, communications, cruise ships, harbours, hotels, housing, marinas, ports, space bases, supply vessels, and other temporary and permanent ocean based construction

2) Defense - current and future marine technologies such as designated operations areas, modularized ocean based systems, seabed facilities

3) Energy - production of energy with developing marine technologies such as thermal gradients, wave, and wind

4) Ports and Harbours - shoreline and offshore facilities for commercial and non-commercial vessels

5) Recreation - current and potential recreational activities such as boating, diving, marinas, marine life observation, swimming, surfing, and enjoyment of intrinsic values and aesthetic qualities

6) Research - mobile and fixed uses for study and forecasting oceanographic and biological processes, and other ocean based research such as archeology, geology

7) Resource and Area Protection and Enhancement - animal/plant/water/seabed protection and enhancement such as artificial reefs, beach nourishment, marine sanctuaries, wetlands conservation

8) Transportation - commercial vessels for transport of persons and goods, navigational aids, and shipping lanes

9) Waste Disposal - dredge spoils, drilling muds, incineration, municipal and industrial wastes, nuclear, sludge, vessel garbage and other vessel wastes

Part 1 State Waters

This Part will evaluate each of the legal issues for each non-extractive use in the context of State waters.

Part 2 Territorial Sea

This Part will evaluate each of the legal issues for each non-extractive use in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the legal issues for each non-extractive use in the context of the Exclusive Economic Zone.

SECTION II MANAGEMENT ISSUES E - M

The Chapters and Parts of this Section will evaluate the following set of management issues:

E. Current and Potential Institutional Disputes

Transboundary ocean uses raise questions of international, federal, State, or regional jurisdiction. These questions extend to authority for institutional oversight and management of ocean uses. In each offshore zone, who has authority and is it adequate to manage identified uses? What is necessary to modify or clarify management authority in order that California can act to establish and protect its ocean interests?

The fallout from legal jurisdictional disputes becomes evident quickly in state/federal and in-state institutional and management disputes, particularly for relatively new uses. A useful example is the claim to authority by the Department of the Interior to issue rules and regulations for hard minerals offshore, and the counterclaim by coastal states like California, that Interior does not have sufficient authority under the Outer Continental Shelf Lands Act. Nevertheless, California must respond to these rules and regulations on a management level while the legal issue remains in dispute, and must coordinate and integrate that response with its management of other uses offshore.

Does California have, and will it have, the management capacity needed to sustain its ocean uses? If not, what options should be considered? The focus of this section, therefore, will be to clarify the status and options regarding: 1) the responsibilities of California's agencies for uses offshore (including transitional arrangements), 2) potential for coordination and consolidation, and 3) State agency relationships to federal agencies. These options will take into account the information generated from examination of the following issues.

F. State Agency Management Capacity

As technology and economics facilitate access to expanded and new uses offshore, management capability will be crucial to California. The capacity and capability to interact with federal management, and to manage ocean uses under State control are important to California's future. The focus of this section, therefore, will be to identify the following: California's own and access to other relevant scientific, socioeconomic, and technological research programs; information and data systems; and policy and technical expertise across disciplines necessary to manage ocean uses. The identification of these elements will be followed by analyses of their use in current management processes, and of options to provide for their continuous development in State management.

G. State Educational Policy, Science, and Research Capacity

Without the human and technical resources needed to fill private and public mandates for offshore management, California may be unable to meet its obligations or exercise its authority effectively. Does California have, and will it have, the educational ocean policy and science programs, and ocean research programs needed to educate and train people for leadership activities in ocean policy and sciences? If not, what options should be considered?

H. Current and Potential Uses, Technologies, Industries, and Benefits

Current uses offshore California include, for instance, transportation, recreation, extraction of fish, and oil and gas. Evolving uses include extraction of resources such as hard minerals, chemicals, and water. In order to manage for sustainable development of California's offshore uses, an identification and description is needed of current, developing, and future uses and related technologies, infrastructure and resource needs.

How California deals with offshore uses will affect management of other Statewide businesses such as promotion of alternative energy sources, import and export markets, tourism, and coastal developments. These links will be addressed as well as direct benefits derived from ocean uses, such as jobs, income, and production of consumer and industrial products and services.

I. Current and Potential Use Impacts

Legal dividing lines offshore do not correspond to the natural or ecological divisions of ocean space. Water, flora and fauna, and uses of California's EEZ interact with those of the territorial sea, and the impacts on ecosystems may extend to State waters and to adjacent land masses. For example, a fishery ecosystem could cross EEZ and territorial sea boundaries; marine and land pollution can cross physical and legal boundaries.

The focus of this section will be identification and clarification of current and potential impacts from uses offshore California, and of impacts from land and other point and non-point sources which affect uses offshore California. These links will be addressed as well as the direct costs of these impacts.

J. Current and Potential Multiple Use Conflicts

The need by more than one user to use the same offshore area can create conflict. This includes the use of one area which precludes or alters areal, temporal, or seasonal uses of that area or another area or impacts other habitats and environments. As access to ocean uses increases, California users will become involved increasingly in these

conflicts. The focus of this section will be to identify current and potential use conflicts as a baseline for application of options generated by other issues sections.

K. Alternative Dispute Resolution Processes and Options

Conflict management and alternative dispute resolution (ADR) processes involve all of the following: anticipation, facilitation, negotiation, mediation, arbitration, and mini-trials. ADR processes offer options beyond litigation. As example of implementation of the first four ADR processes mentioned, California currently brings together responsible federal, State and local agencies to contract, review, and produce environmental impact statements/reports for offshore projects. To the extent that they may provide useful, cheaper, more equitable, and more timely treatment of conflicts, ADR processes should be considered for the State's ocean uses management infrastructure. ADR processes will be considered as an option to litigation or as part of any recommendations to resolve potential intra-State or State/federal management or jurisdictional conflicts. The focus of this section, therefore, will be an inventory and analysis of ADR processes and options for their application to offshore activities.

L. Federal and State Incentives Options

Should California initiate an incentive program in State waters for development and conservation of ocean uses, and for the use of alternative dispute resolution processes? Should California also encourage a federal policy of developing incentive programs in federal waters? The focus of this section will be an analysis of options to address these questions. Example incentives include rents on resources; transferable development rights; the banking concept for pollution and mitigation activities; trade markets for pollution mitigation or other banked credits; rationalizing environmental and socioeconomic costs of uses; and protocols and infrastructure for alternative dispute management processes.

M. State Options for Partnership and Cooperation

What is California doing now, and what are its options regarding cooperation with regional, national, and international parties in order to protect and further its interests offshore? Though they provide legal jurisdictions, State, territorial sea, and EEZ boundaries can be constraints to effective use management.

Because the ocean is a fluid medium and use impacts often cross legal boundaries, partnership among managing parties (whether State/federal, State/state or intrastate) is essential to sound resource/use management. In addition, cooperation must be a basic ocean use management principle so that California can partake equitably in the benefits and costs of offshore uses. The focus of this section will be the identification of cooperative and partnership options for regional and joint federal/State management regimes in California's adjacent

ocean waters. The identification will include the costs, benefits, and opportunities foregone of each option.

Though California's legal options with respect to the U.S. territorial sea extension will be considered in Issue D, this section will include options for State/federal partnership and cooperation relating to the effective management of uses in the territorial sea. A component of any cooperative scheme also will include evaluation of options for revenue sharing.

CHAPTER 4 EXTRACTIVE OCEAN USES - LIVING MARINE RESOURCES

For each of the management issues, this Chapter will evaluate the following uses:

1) Animals - fish, shellfish, mammals, birds, invertebrates
   Industries:
   - Aquaculture/Mariculture: sea ranching fish for stock enhancement, sale, consumption, and research for food, biotechnology, etc.
   - Biotechnology: harvesting fish or their constituents for useful purposes in a controlled environment, e.g. genetic engineering, pharmaceuticals, and industrial compounds
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   - Commercial harvesting: harvesting plants for sale, subsistence or cultural and traditional harvesting
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<u>Part 1</u> <u>State Waters</u>

This Part will evaluate each of the management issues for each of the living resources in the context of State waters.

<u>Part 2</u> <u>Territorial Sea</u>

This Part will evaluate each of the management issues for each of the living resources in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the management issues for each of the living resources in the context of the Exclusive Economic Zone.

CHAPTER 5 EXTRACTIVE OCEAN USES - NON LIVING MARINE RESOURCES

For each of the management issues, this Chapter will evaluate the following uses:

1) Chemicals - extraction from hydrothermal processes and the water column of chemicals and their precipitates

2) Hard minerals - non-organic minerals, e.g. cobalt, gold, manganese, polymetallic sulfides, black sands

3) Oil & Gas

4) Sand & Gravel

5) Water - electrolysis, desalination, diversion for development and erosion control

Part 1 State Waters

This Part will evaluate each of the management issues for each of the nonliving resources in the context of State waters.

Part 2 Territorial Sea

This Part will evaluate each of the management issues for each of the nonliving resources in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the management issues for each of the nonliving resources in the context of the Exclusive Economic Zone.

CHAPTER 6 NON EXTRACTIVE OCEAN USES

For each of the management issues, this Chapter will evaluate the following uses:

1) Commercial - construction of mobile and fixed bases for building and services such as airports, communications, cruise ships, harbours, hotels, housing, marinas, ports, space bases, supply vessels, and other temporary and permanent ocean based construction

2) Defense - current and future marine technologies such as designated operations areas, modularized ocean based systems, seabed facilities

3) Energy - production of energy with developing marine technologies such as thermal gradients, wave, and wind

4) Ports and Harbors - shoreline and offshore facilities for commercial and non-commercial vessels

5) Recreation - current and potential recreational activities such as boating, diving, marinas, marine life observation, swimming, surfing, and enjoyment of intrinsic values and aesthetic qualities

6) Research - mobile and fixed uses for study and forecasting oceanographic and biological processes, and other ocean based research such as archeology and geology

7) Resource and Area Protection and Enhancement - animal/plant/water/seabed protection and enhancement such as artificial reefs, beach nourishment, marine sanctuaries, wetlands creation and conservation

8) Transportation - commercial vessels for transport of persons and goods, navigational aids, and shipping lanes

9) Waste Disposal - dredge spoils, drilling muds, incineration, municipal and industrial wastes, nuclear, sludge, vessel garbage and other vessel wastes

Part 1 State Waters

This Part will evaluate each of the management issues for each of the nonextractive uses in the context of State waters.

Part 2 Territorial Sea

This Part will evaluate each of the management issues for each of the nonextractive uses in the context of the Territorial Sea.

Part 3 Exclusive Economic Zone

This Part will evaluate each of the management issues for each of the nonextractive uses in the context of the Exclusive Economic Zone.

APPENDICES

BIBLIOGRAPHY