EXECUTIVE CHAMBERS

HONOLULU

LINDA LINGLE
GOVERNOR

June 4, 2004

Admiral James D. Watkins
Chair, U.S. Commission on Ocean Policy
1120 20th Street NW
Suite 200 North
Washington, DC 20036

Dear Admiral Watkins:

On behalf of the State of Hawai`i, I am pleased to offer comments on the *Preliminary Report of the U.S. Commission on Ocean Policy*. These comments reflect the collective input of numerous state agencies, the academic community, and other interested parties.

Hawai`i is truly an ocean state, as no point on land is farther than 30 miles from our coast. The ocean affects every aspect of our lives. Ninety-eight percent of our goods are brought to and between our islands by ships. We are the world's most-isolated populated-place. All these factors, and many others, mean that recommendations in this Preliminary Report will significantly affect the 50th State.

I agree with the guiding principles that have been outlined in this report and that form the basis for many of the recommendations. The comprehensive and broad-based approach taken by the Ocean Policy Commission is commendable.

Hawai`i's comments, provided in the attached Appendix, are based on four concerns:

1. There should be greater participation by States in the final discussions surrounding ocean policies and their implementation. States should have a direct and substantial role in prioritizing the report's recommendations and in developing implementation strategies to ensure they are well tailored to states' needs and capabilities.

2. Adequate funding for federal and state program implementation is critical to success. Any new state responsibilities should be paired with adequate financial assistance to

carry them out. Without the money to do the job, a new federal mandate will create problems, not solve them.

3. The "Islands" should be considered a "region". Geographic proximity is less important than commonality of issues. Thus, we would recommend that Hawai`i, Guam and Puerto Rico be grouped and considered as an "Island Region" for possible pilot programs being proposed by the Commission.

4. Research should focus on supporting management issues and needs to ensure results-oriented success. The report is noteworthy in its focus on research. But research alone is not enough. A greater emphasis should be placed on the practical applications of the research and immediate ocean management needs.

In Hawai`i, we recognize that our ocean resources are as vital a component of our future as our seafaring past. Our host culture, the early Hawaiians, explored the entire Pacific. Our State's position in the middle of the Pacific gives us a unique vantage point from which to continue to explore the opportunities and challenges identified in the Commission's draft report.

Thank you for this opportunity to comment on the Commission's preliminary report. Please contact Peter Young, Chairman, Department of Land and Natural Resources (808) 587-0401, if you have any questions on these comments.

Sincerely,

LINDA LINGLE

Attachments

Cc: Peter Young
Congressional delegation
Agency Department Heads

Appendix A
Summary of Comments of Governor Linda Lingle
State of Hawaii

Our comments are organized into two sections: (1) overall comments on the report, and (2) specific comments on each chapter. Our overall comments are bulleted below and expanded upon in the subsequent text. This is followed by our chapter-by-chapter review.

Overall:

- The recommendations are too federally-oriented. We believe the overall ocean policy process should have more involvement at the state level.

- The role of each state in the national system of ocean governance should be more pronounced.

- The National Ocean Council (NOC) should be expanded to include at least one Governor from each of the proposed regional ocean councils to help coordinate federal, state, tribal, and local planning actions.

- We are concerned that the proposed administrative structure appears top-heavy and unwieldy for coordination.

- While the National Ocean Council coordinates funding across federal agencies and has the lead for facilitating state, local, and regional collaboration, ultimately, the federal and state agencies have the responsibility to implement programs. The implementing agencies should be provided the resources to successfully address the missions and statutory mandates of the NOC.

- The proposed subcommittees the Committee on Ocean Science, Education, Technology and Operations (COSETO) and the Committee on Ocean Resources Management (CORM)) should have stronger state representation. There needs to be a mechanism established for the subcommittees and the Presidential Council of Advisors on Ocean Policy to interact with one another.

- The Presidential Council of Advisors on Ocean Policy is too broad-based in its mandates and could easily become unwieldy and unproductive. It needs to have a clearly defined framework and structure to function as envisioned.

- Staffing from the Office of Ocean Policy should be broadened to include regional liaisons to assist in the creation of regional councils and to ensure that regional issues of critical importance are expressed to the NOC.

- We are opposed to the recommendation that a particular entity (e.g. a Sea Grant director) be included in the make up of the regional boards. There may be more appropriate region-specific entities.

- While we fully support the need to coordinate offshore management among federal agencies, there is a critical need to ensure that what is occurring outside the jurisdictions of the states and territories is fully coordinated with activities and management decisions occurring inside the states' jurisdictions or between islands within the Hawaiian Archipelago.

- The report is too focused on research and technical development. There needs to be more emphasis on management. Linkages are needed to translate the output from research and development into management. Support is needed for results-based management.

- As the report indicates, tourism and recreation constitute the fastest growing sectors of the ocean economy, yet there is no chapter in this report that discusses the management challenges associated with ever-growing tourism and recreation impacts on ocean resources.

Generally, our concerns regarding this report are not based on the recommendations in the subject matter chapters, but are based on the insufficient role for the states. While the report outlines many opportunities for states in ocean and coastal management, there is very little linkage between the states and the proposed NOC.

We understand that the objective of the NOC is to coordinate activities on the national and international level between federal agencies. In our experience, however, without the active involvement of the states, the most critical and by far the most productive zone of the ocean is overlooked. Without state involvement, it is unclear whether the states are going to able to meet the mandates developed by the NOC. Our recommendation is that the NOC be expanded to include at least one Governor from each of the proposed regional ocean councils to help coordinate federal, state, tribal, and local planning actions.

We are concerned that the proposed administrative structure appears top-heavy and unwieldy for coordination. The report recommends a National Ocean Policy Council, regional councils and a variety of coordinating committees scattered among resource management agencies. Mechanisms for efficient implementation of these new policies should be more clearly defined.

Federal agencies need to be willing to pursue reorganization. This will simplify policy implementation and discussions with the Executive Branch. Effective coordination and a clear explanation of the means by which implementation can be driven at the national level are critical to successfully changing outdated policies across all regions of the U.S.

The proposed National Ocean Policy appears to mirror Hawaii's efforts incorporating an "ahupua'a" approach to resource management (e.g. a Hawaiian concept connecting the watersheds to the coast and offshore waters.) Many of the recommendations and proposed activities such as conserving and restoring coastal habitat, protecting wetlands and promoting

watershed efforts directly comport with the current objectives and efforts in Hawai'i, and thus are strongly supported.

It should be noted that many of the recommendations appear to be unfunded (at least at the state level). Thus implementation of these measures will be severely limited without appropriate funding for agencies that may be charged with carrying out these program measures.

We are concerned with the establishment of a NOC bureaucracy, particularly the uncertainty with the ability of the Council to affect change in existing agencies, programs and their budgets. It should be made clear that the NOC coordinates and facilitates state, local and regional implementation, and that the agencies have lead for implementing programs. While the NOC may be helpful in coordinating program funding across agencies to maximize efficiencies and impact, it is important that agencies with statutory mandates have resources to successfully address their missions.

Without a clear mandate to link the NOC and its actions and policy decisions to those of the states and territories, what is being proposed is another layer of federal government that may coordinate programs better at the federal level but falls short of meeting the guiding principles articulated in this Report.

The NOC and the proposed subcommittees Committee on Ocean Science, Education, Technology and Operations (COSETO) and the Committee on Ocean Resources Management (CORM)) should have strong state representation and participation. This can be justified because the purview of these councils/committees significantly overlaps state interests. Perhaps the focus could be on the subcommittees (COSETO and CORM, including expanded role for the Council on Environmental Quality) with NOC policy direction and oversight.

Education, technical assistance, research, and science priorities should not be isolated in the science subcommittee, COSETO. The structure should be amended to provide a balanced portfolio and include education, technical assistance and a research, science needs, survey and priorities functions that are in CORM and/or overlap the management and science groups. There should be some mechanism established for all the subcommittees and the Presidential Council of Advisors on Ocean Policy to interact with one another.

The Presidential Council of Advisors on Ocean Policy is too broad based in its mandates and could easily become very unwieldy and non-productive. There is not a specified number of members or a proposed framework with key issue areas identified that would assist this group in a focused approach to advising on ocean policy. This entire structure should be re-examined.

Due to our long and well-established record of coordination and collaboration across the region, the All Islands Region is willing to be a pilot project for addressing implementation of the functions outlined in the Preliminary Report. As this will require additional staff time and travel to address a new set of issues, it is anticipated that additional funding will be made available through grants to the states and territories to act as a pilot site.

Under recommendation 5-5, the composition of the regional board includes specifically naming that a Sea Grant director from at least one state in the region be included in the representation. In the pacific, there is only one Sea Grant director and this program does not necessarily represent the interests throughout the region. We are opposed to the recommendation that a particular entity (e.g. Sea Grant) be included in the make up of the regional boards, as there may be more appropriate regional entities to represent the interests across a region.

In Chapter 6 on Coordinated Management in Federal Waters, there is no mention of the need to coordinate between federal waters and the territorial waters of each state. While we fully support the need to coordinate offshore management among federal agencies, there is a critical need to ensure that what is occurring outside the jurisdictions of the states and territories is fully coordinated with activities and management decisions occurring inside three miles or between islands within the Hawaiian Archipelago.

As stated throughout the report, an important part of moving towards an ecosystem-based management approach is to consider the cumulative impacts across boundaries. The report needs to include coordination between activities such as offshore aquaculture, fisheries management, enforcement. There is a need to ensure that coordinated offshore management is done in a manner that considers the impacts of these decisions on nearshore and coastal resources and the communities living adjacent to the area. In addition, it must be made clear that the appropriate state agency is consulted. It should be stressed that Hawai'i is interested in the Exclusive Economic Zone (EEZ) and offshore activities that may occur therein, and endorses an offshore management regime in EEZ that is geographically linked.

Throughout the report and in the organization of the NOC office and subcommittees, management is not given the needed focus when compared to research, education and integrated technical development. The report needs to focus resources on translating the output from these other sectors (research, education, and integrated technical development) into the management setting, and supporting results-based management and best management practices. Since two of the guiding principles in the report are an ecosystem approach and adaptive management, there is a need to make the linkages to ensure this happens.

As the report indicates, tourism and recreation constitute by far the fastest growing sectors of the ocean economy and yet there is no chapter in this report that discusses the management challenges associated with ever-growing tourism and recreation impacts on ocean resources. In Hawai'i, one out of every five visitors from the west participates in snorkeling or diving activities. About eighty-percent of all visitors participate in some form of ocean or coastal recreation ranging from sun bathing to swimming to jet skiing and diving. The intense use of some of our nearshore waters coupled with the crowding on our beaches, in our parks, and to our recreational facilities is a management challenge. We need to move beyond the traditional approaches to management to address this myriad of impacts. The report does very little to address this issue.

Chapter-by-Chapter Comments:

The following portion of our comments are designed to provide detailed edits on the various chapters and the recommendation made within these chapters. In the case where there are no comments on a chapter or a proposed recommendation, please assume that we are in general support of the content.

Chapter 1 – Recognizing Ocean Assets and Challenges

The basic point of this chapter is that ocean and coastal economies contribute significantly to the U.S. economy. To get this information, a special multi-year project was undertaken because none of the federal agencies with ocean and coastal responsibilities invest significantly in understanding their economic impact as a whole (compared to $100 million spent annually by the Department of Agriculture). In this chapter, it is acknowledged that "[s]tandard government data are not designed to measure the complex ocean economy," but unfortunately, the report does not stress the need for such standard measurements. It isn't until Chapter 25: Creating a National Strategy for Increasing Scientific Knowledge, that recommendation 25-3 (p. 312) proposes a national program for social science and economic research that would create an interagency group to look at the ocean economy.

Even this recommendation seems to fall short of suggesting that standard economic data collection tools for the ocean economy should be integrated into all U.S. economic data collection efforts. In order to develop an effective, cohesive lobby for ocean and coastal issues, their economic impact, over time, must be understood and appreciated. It is important that our coastal communities and the general public "appreciate the economic importance of our oceans and coasts." A healthy environment is good business. Any citizen or group should be able to access this information as easily as finding out how much the agriculture industry, or a subset such as wheat, contributes to the U.S. economy each year. In this regard, we recommend that an emphasis on economic valuation of our ocean and coastal resources be pursued to demonstrate the importance of healthy ecosystems to a state's economy. This recommendation should be stronger and the need for it included in Chapter 1 where the issue is first discussed.

The need to quantify the economic data is particularly true of a visitor industry based economy such as Hawai'i, which is reliant upon our unique environment and culture as its main attraction for first time and repeat visitors. In addition, the value of 'a day at the beach' also needs to be taken into account with respect to socio-economics.

Marine transportation and ports are vital elements for a stable economy. It provides economic infrastructure to global markets, goods, and products as well as employment opportunities. In the case of Hawai'i, shipping accounts for about ninety-eight percent of imported goods. Although economically important, this use of marine waters must be tempered by the consideration of impacts to ocean and coastal resources as a result of the need to expand land-side maritime operations, dredging to increase harbor depths for larger vessels, and land-use implications due to increasing population demands and evolving maritime technologies.

On page 7 the value of coral reefs in Hawai'i is estimated at $800 million in gross revenues annually, the figure of $360 million is the 'added value' per year. For the reference please go to the Hawai'i Coral Reef Initiative Research Program web site at www.hawaii.edu/ssri/hcri and download the "Economic Value of Hawaii's Nearshore Reefs" brochure.

On page 8 in the discussion on nonmarket values, please add in the cultural importance of coastal and ocean resources to the list discussed. For the islands and for all the indigenous cultures represented in the U.S., this is an important value to highlight.

On page 9 in the discussion on exploration, inspiration and education, it is important to note here that historic and cultural events are more than just shipwrecks and other submerged sites, that in the pacific this was way of life, the early Polynesians and the other pacific island cultures explored the oceans on a scale and at a time that centuries before similar activities where occurring in Europe. As we strive to inspire and educate the public about our oceans, we need to celebrate the historic uses and the scale of exploration that ties us to our roots and links our future to our past.

Education must not only be science-based it must be "place-based" and "multicultural-based" in the case of Hawai'i and other island jurisdictions. In this way, education and outreach can be accomplished in a culturally sensitive and appropriate manner. The report also fails to address the possibilities for work force education through ocean related skills/studies at vocational or technical schools.

The impacts of global climate change are clearly more pronounced in island settings given limited land area and eroding coastal landscapes. International coordination is essential to addressing this problem as it clearly impacts the health of our ocean and coasts. The U.S. should pursue collaborative efforts around the world and take an international leadership role in global issues such as marine debris, global warming, sea level rise, fisheries management, coral reef health, etc.

On page 11, in the discussion on fisheries declines, there is no mention of the impacts to habitats from destructive fishing practices. Also on the same page, while we support the growing marine aquaculture industry.

With regard to gaining more data and information regarding climate change, the U.S. should strongly support the efforts already underway for the integrated ocean observation systems (IOOS). International relations to insure compatible technology and data sharing should be pursued.

Primer on Ocean Jurisdiction-

In the section on state seaward boundaries in the United States, we suggest language that recognizes that not all states are in agreement with the Territorial Sea being defined from zero to three miles. Texas, Florida and Puerto Rico are named as exceptions to this, but several other states do dispute the boundary. Hawai'i claims archipelagic status around all waters in the main

Hawaiian Islands and feels that it has the historical documentation to substantiate this claim. In addition, the State of Hawai'i Constitution reflects a greater than three-mile claim. While the State of Hawai'i acknowledges that rights of innocent passage and military activity, for the purposes of resource management, enforcement, regulation of vessel traffic, and numerous other activities, we have systematically based our management decisions on this archipelagic claim.

Chapter 4: Enhancing Ocean Leadership and Coordination

Page 49, paragraph 1 reads: "ocean policies should promote an ecosystem-based management approach." This approach is essential to maintaining a clear cause and effect relationship between the land, sea, and air and should be a driving factor in coordination and collaboration of efforts at all levels.

Page 49, paragraph 2 reads: "As part of the move toward an ecosystem-based management approach, a precautionary approach should be incorporated into decision-making processes and adopted by the NOC in developing national standards for ecosystem-based management." A standards-based approach to management has much to recommend but should take into consideration the differences in each region. In terms of ecosystems, a mile of wetland buffer in Texas is not equal to a mile of wetland buffer in Hawai'i.

Recommendation 4-1 and 4-2: Regarding the establishment of the NOC
A NOC composed only of executive branch appointed cabinet secretaries and directors raises issues of continuity between policies, mandates, and actions of council members due to outgoing and incoming administrations. Again, we must re-iterate the need to have the states at the table on the NOC, on the Advisory Council and the subcommittees.

To balance the representation on the NOC and the Presidential Council of Advisors on Ocean Policy, we recommend that both the President and Congress should select the council members for the Presidential Council of Advisors on Ocean Policy. This would help ensure the independence of the actions of this body as well as encourage the continuity of its policies.

Recommendation 4-5: Regarding a Presidential Council of Advisors on Ocean Policy
Presidential appointees for nongovernmental organizations should include the Director of the Coastal States Organization which would insure the voice of federally-approved coastal states and the All Island Affairs Committee.

Recommendation 4-10: Regarding the establishment of Regional Ocean Councils
Establishment of a Regional Ocean Council as described in this section within the pacific for the islands will be challenging since we are separated by ocean from each other as well as the continental U.S. The current structure of regional divisions will need to be reexamined for island application.

Chapter 5: Advancing a Regional Approach

Although it is commendable that the commission recommended that regional ocean councils should be developed with a broad flexible approach, in practice this might prove difficult and time consuming. Just agreeing on the regional boundaries could be problematical and greatly delay the formation of the regional councils. Some thought should be given to which configuration makes the most sense for the regional ocean council. Sub-regions should be considered for management issues that differ because of the large ocean areas separating the islands of the Pacific, as well as our cultural, biological and social differences that could influence ecosystem-based management decisions.

Also, since existing bodies, such as the Regional Fishery Management Councils are to retain their scope and function, it will be more difficult to establish ecosystem-based management approaches. The three examples of existing regional management areas shown in Figure 4.3 are depicted to indicate the problems inherent in different regional boundaries. The recommendation is to improve communication. Perhaps a closer look should be given to consolidating existing regional efforts into the new ecosystem-based regional ocean councils. This would also facilitate the supporting efforts of the proposed regional ocean information programs. The vertical integration of these existing and proposed entities using common boundaries would greatly reduce the problems of duplication of effort and the potential for gaps in information.

On page 57, the U.S. Island States and Territories collaborate on more than just strategies to protect coral reefs. The collaboration on coral reefs grew out of their work on coastal zone management issues and it was due to the strong relationship that had already been established with other initiatives that the coral reef efforts are so successful.

Other comments on Chapter 5 are outlined in the overall comments section.

Chapter 6 – Coordinating Management in Federal Waters

The commission again neglects to recognize that there are actions in Hawai'i that could provide insight or guidance for the nation. A case in point is the box on page 65 that describes the establishment of an offshore aquaculture facility. There is no mention that under the Hawai'i Ocean Leasing Law, the State granted the first open ocean lease for offshore cage culture in the nation.

<u>Recommendation 6-1</u>: Regarding ensuring that current and foreseeable use of federal waters is administered by a lead federal agency.
We again must re-iterate that to ensure full consideration of the public interest, we recommend that coordination also include appropriate state agencies since increased uses and potential impacts in federal waters do not recognize boundary lines or jurisdiction.

The remainder of our comments on this section are on marine protected areas (MPAs). Our first question is; why is this management tool discussed in this chapter? MPAs are not just a tool used by federal agencies. Hawai'i has had MPAs designated since 1967, for over 35 years. Our

first MPA was Hanauma Bay Marine Life Conservation District. We have learned a significant amount about the management and the designation process for MPAs since this first site. To date, there are over 45 types of MPAs in Hawai'i, under varying levels of management and protection. We are currently in the process of re-evaluating our MPA program and developing a new framework and criteria in which to more effectively manage our current sites and to better define the selection process for future sites.

Our process has always been community-driven, and most sites have been requested by community groups. By law we are required to hold public hearings prior to the establishment of any MPA-related regulations. Our process to designate MPAs and to ensure that they are acceptable to the communities that are affected takes anywhere from three years to over a decade.

Hawai'i has been involved in a federal/state partnership to manage MPAs for several years. The Hawaiian Islands Humpback Whale National Marine Sanctuary is a co-managed program, where eighty percent of the waters within the boundaries are State waters. Hawai'i is in the process of designating State waters in the Northwestern Hawaiian Islands (NWHI) as a State Marine Refuge. Some of these same waters are administratively claimed as part of the Hawaiian Islands National Wildlife Refuge. We are also involved in the process to create a National Marine Sanctuary in the NWHI, which may or may not include State waters, and are currently working with both the U.S. Fish and Wildlife Service (USFWS) and the NWHI Coral Reef Ecosystem Reserve for cooperative management in adjacent waters. This is the largest MPA in the nation.

MPAs are effective tools for managing specific activities affecting coral reefs and other ocean habitats, with the understanding that it's not benthic communities or other resident organisms that can be managed, but rather, it's the human activities that are detrimentally affecting the ecosystem. Simply stated, "no take" does not mean "no impact". While fishing pressure (actually over-harvesting, as there are more key species than fish involved) is one of the top activities impacting coral reef ecosystems worldwide, many reefs suffer far more from runoff, coastal pollution, sedimentation, eutrophication, and tourism-related damage (anchors, SCUBA divers, reef-walkers, collectors, jet skis, etc). Establishing an MPA without adequate management of adjacent land-use activities, upstream water quality, down stream substratum quality and non-fishing impacts, will do limited good in the long run. Most of the management measures for the adjacent land-use activities fall under the jurisdiction of the states. National policy needs to recognize not only flexibility in the type of MPA and the issue of time (rotational, seasonal, permanent), but also the activities adjacent to these areas.

Page 66, reads: "These areas MPAs have also been recognized for their scientific, recreational, and educational values." It should also be emphasized that MPAs should also be recognized for their historic and cultural value.

Page 68, reads: "The design of MPAs should not unreasonably limit important national interests, such as international trade, national security, recreation, clean energy, economic development, and scientific research. For example, in most cases freedom of navigation through MPAs should not be restricted. However, where some infringement on such national interests is deemed essential to achieving the purposes of a [MPA], restrictions should be based on *sound science*,

with a plan for ongoing monitoring and modifications over time. The overall ecological and socioeconomic impacts of MPAs should also be evaluated at the national level." It is recommended that "sound science" referenced in the paragraph be replaced with "best available science," to be consistent with other references in the report.

Also, there is a danger of stalling precautionary measures until an administration's definition of sound science is met. In addition, national interests such as freedom of navigation through MPAs should not be unrestricted given the report's emphasis on ecosystem-based management. Instead of balancing economic and environmental interests, this paragraph gives importance to economic concerns. Economic growth is not a necessary precursor to environmental and public health protection. Finally, overall ecological and socioeconomic impacts of MPAs should also be evaluated based on state/local input.

Recommendation 6-3: Regarding the NOC developing national goals and guidelines for a uniform process for the effective design and implementation of MPAs.
We are opposed to this recommendation as it is currently written. It is our understanding that the MPA Center and the Federal Advisory Council that were created under Executive Order are doing more than an inventory of MPAs. We are interested in knowing how the work of the MPA Center and the Federal Advisory Council will be incorporated into the proposed goals and guidelines for effective design and implementation of MPAs that are being proposed in this recommendation. We are also concerned that this national process may conflict directly with the processes that have been ongoing for over 35 years and are currently being revised in Hawai'i and other locations. MPAs are an excellent example of sites that need to be designed based on local and regional considerations, and we are very concerned about a federal approach that limits our abilities to consider the impacts to both the resources and the effected communities at the local level.

In Hawai'i, 25% of our marine life is found nowhere else in the world. We are considered by many to be our own region, when it comes to biodiversity and other factors. Our waters are very different than the waters of American Samoa, Guam, or California. A uniform process developed from the top-down by the NOC may not consider any of these factors or the fact that in each state or territory cited above, there is a difference in culture, values and language. In addition, what is proposed for a national set of goals and guidelines may be applicable for new sites, however, it will be difficult to apply to all of the existing sites. .

Recommendation 6-4: Regarding regional councils, or other appropriate regional entities, should actively solicit stakeholder participation and lead the design and implementation of MPAs. The design should be conducted pursuant to the goals, guidelines, and uniform process developed by the NOC.
We support the concept of actively soliciting stakeholder participation in the design and implementation of MPAs. However, we do not support the concept that this initiative should be lead by a regional entity, but rather by the state (and its locally based community groups), with support from a regional group as needed. We are, as stated above, opposed to the design being conducted based on a national set of guidelines.

Chapter 7 – Strengthening the Federal Agency Structure

Recommendation 7-2. Regarding the Office of Management and Budget's (OMB) review the National Oceanic and Atmospheric Administration 's (NOAA's) budget within OMB's Natural Resources Programs.
The commission recommends that Congress pass an organic act to codify the establishment and mission of NOAA, as well as recommending that OMB review NOAA's budget separate from that of the Department of Commerce, and along with other natural resource programs. Making NOAA a separate agency would assist in meeting the goals of recommendations 7-1 and 7-2, giving NOAA more flexibility, prominence, and authority to coordinate coastal and marine activities and research with other federal agencies.

Recommendation 7-5: Regarding the consolidation of similar ocean and coastal programs.
The move towards structural reorganization is important for efficiency purposes within and among federal departments and agencies. The consolidation of various agencies and coastal-related functions within a single department would be appropriate. However, attention must be given to the potential inadvertent compromising of missions and related programs. There is a need to insure that these programs, which may provide necessary support and resources to end-user states and local governments, are not overlooked.

We have no additional comments on this chapter. Our goal is the ensure that the proposed restructure leads to better coordination at the national and local level and to better ocean governance that is more inclusive and considers the input from the states.

Chapter 8 – Promoting Lifelong Ocean Education

The report does a good job in detailing the need for K-12 curriculum and incentives for ocean-related degree work at the university levels, but fails to address the possibilities for work force education through ocean-related skills studies at vocational or technical schools. The addition of these venues could produce a work force that enters with a more than competent level of skill, and would serve to help provide the numbers of skilled workers that will be necessary as the resource recovery needs, the transportation needs, and the environmental management needs of the nation continue to grow.

We recognize the importance of ocean education and recommend that the Ocean.Ed vision and strategy be developed with State input. To the extent possible, the national vision should encompass state standards incorporate model ongoing programs from the states. The overall implementation strategy should include goals and priorities from the states, and clearly outline how the strategy will be implemented, including funding and training components

A critical component of gaining acceptance for the use of the ocean curriculum by teachers is to ensure that they are trained in the materials and have some comfort level with teaching the information. This is not recognized as a critical element of program success and implementation in this report.

Emphasis is placed on ocean education and growth of an ocean literate workforce. However, there is no guidance or recommendations that address the need for job creation in order for a newly skilled and trained workforce to move into.

The education office located under the NOC should become a repository/clearinghouse for ocean education and should function as a one-stop shop for teachers looking to incorporate ocean and coastal education into their curriculum.

A critical component of gaining acceptance for the use of the ocean curriculum by teachers is to ensure that they are trained in the materials and have some comfort level with teaching the information. This is not recognized as a critical element of program success and implementation in this report.

Crosscutting themes should also recognize the bridging of gaps between the research and resource managers and the decision and policymakers. Cross-cutting academic institutions should also include planning, resource management, and/or policy departments and programs for educational partnering. It is also important to emphasize the importance of culture and the role that Hawaii's seafaring traditions have had on these islands. Ocean education is about more than just math, science, and engineering, and there is a critical need to bridge the gap between the discoveries that are made in science and how this effects our every day lives. To do this we need to train the researchers how to explain the importance of what they are doing in terms that can be understood by the every day public and the media.

There is need to clarify the connection between Ocean.Ed and the regional science boards proposed in the report, particularly as it relates to technical assistance, training and professional development programs. Ocean.Ed needs to build on the state and local capacities for informal education and outreach. The federal agencies should be required to support state and community-based education efforts and not "recreate the wheel".

This chapter discusses the desirability and requirements for a deliberate enhancement of ocean education from "K-gray", including outreach to the general public. The University of Hawai'i (UH) already is working vigorously in this area, but resources are stretched as far as possible. New resources that might be made available through the implementation of the recommendations within this report could be put to good use immediately for the benefit of Hawai'i. Some examples are discussed below.

The School of Ocean Earth Science and Technology (SOEST) is a founding member of the Consortium for Ocean Research and Graduate Education (CORE), which has played a major role in advocating for ocean research and education at the national level. In addition to graduate degrees in oceanography, SOEST offers the Global Environmental Sciences undergraduate degree, with a heavy emphasis on basic science and mathematics education and applications to the ocean and other elements of the earth system. SOEST participates in the National Ocean Science Bowl organized by CORE, reaching out to high school students throughout Hawai'i. SOEST conducts a biennial open house, where more than a thousand K-12 students and many families tour our facilities and learn about our research. SOEST also runs a Speakers Bureau for educational outreach. National Science Foundation (NSF)-funds the Kumu-Ola (Source of

Knowledge) program, which seeks to attract minority students, particularly native Hawaiians, into careers in science, technology, engineering, and mathematics through the integration of cultural knowledge into curricula. SOEST has the potential to be a leading force in U.S. marine education and training needed to support the expansion of ocean professional employment, including observing system technology. Hawai'i students should have the opportunity to fill some of these positions that will be based in Hawai'i and elsewhere in the U.S.

In addition to SOEST, the UH colleges of both natural and social sciences have numerous programs that are ocean-related. The UH system has campuses across the State and many of these campuses provide both basis courses in marine sciences, and technical training for non-science majors. Similar programs exist at Hawai'i Pacific University and Chaminade University, both private institutions of higher learning. It is our recommendation that one of the first steps that should to be undertaken by Ocean.Ed is an inventory of existing programs, as well as an assessment of the courses and curriculum available. There are many good examples of ocean education and it is unlikely that much will need to be created, but instead adapted from places like Hawai'i and the other coastal states for use in areas where these programs do not exist.

Recommendation 8-2: Regarding funding of Ocean.ED.
Given the agency representation in the NOC, there are concerns about its ability to administer funding appropriately. Input from end-users at the state and local levels should be factored into the allocation of these funds. There is also a concern that by creating the OceanED, that what would be created is an unnecessary and inefficient level of bureaucracy that will be using its appropriated funding to support itself rather than on state and local education needs. A mechanism for the allocation of resources to the state and local level should be developed. The recommendation as currently written would provide a line item in NOAA's budget for Ocean.Ed that is overseen by the NOC and develops a streamlined process to distribute funds to other federal and nonfederal agencies. The financial burden of education for student for K-12 is primarily borne by the states, distribution of funds to mainly federal agencies will do little to increase ocean education on the ground in the schools.

Recommendations 8-4, 8-6 and 8-7: Regarding the effectiveness of ocean related education; working with state and local education authorities to meet education standards; and establishing stronger relationships between research and education communities.
While we support each of these recommendations, as already noted, the scope of ocean education needs to go beyond math and science. In addition, there is very little if any consideration given to the teacher in the classroom and the need to work with them in the design of the education materials and to ensure that they are adequately trained in the use of the curriculum materials developed.

Recommendation 8-5: Regarding the relocation and expansion of the Centers for Ocean Sciences.
It is important to indicate where these expanded regional centers would be located. For the islands, real-time assistance and access to information/resources provided by the center would be a critical factor as to whether or not a center would be located within the pacific and, if so, on what island.

Recommendation 8-9: NOAA, NSF and others should support colleges and universities in promoting introductory marine science courses to expose students, including non-science majors to these subjects.

This recommendation is supported with the caution that opportunities for experiential learning often provide a stronger basis for learning than a traditional college course. The Marine Option Program is a UH system-wide undergraduate certificate program that encourages hands-on involvement in marine science. The Marine Option Program has directly contributed to the development of Hawaii's next generation ocean-oriented workforce. The certificate program is intended to ensure that non-science majors that are interested in the oceans can be exposed to and learn about all facets of ocean careers. Again, this is the type of program that should be assessed for its applicability across the county

Under "Public Outreach" there should be a coordinated effort to develop key messages to target groups beyond the traditional education institutions, zoos and aquariums. While the U.S. has more coral reefs than tropical rainforests, most people know more about the latter than the former. In tourist-based economies such as Hawai'i, there is a need to train the tourism providers about our ocean resources, as they are often the best messengers about the resources to the visitor participating in some form of ocean recreation.

An equally important target group is civil engineers, as they are taught to divert runoff from roads and the land into the coastal ocean as quickly as possible. This is okay for temperate and upwelling systems, but using coastal coral reefs as the dumping ground for often-contaminated runoff is the worst possible scenario. Engineering has to focus on retention, percolation and filtration. In most island cases, storage for potable uses is even better.

The Waikiki Aquarium is an outstanding ocean education outreach program of UH Mānoa, touching many local residents and tourists alike. Likewise, a partnership with the Polynesian Voyaging Society, Honolulu Community College's Marine Education and Training Center, and other state and federal partners is involving students in both Hawaiian seafaring traditions and in learning about and protecting the islands and reefs that will be visited during voyages of the sailing canoe Hokule'a through the NWHI. The Polynesian Voyaging Society has worked with a long list of government, educational, scientific and cultural partners in developing its new educational mission, which includes a detailed teacher curriculum. This is the type of activity that would be expanded and built upon through the recommendations in this chapter of the report. Inspiring our island youth through their oceanic heritage is an important contribution to their education.

Chapter 9 – Managing Coasts and their Watersheds

Hawai'i is a good example of caring for watersheds, where forested watersheds both provide nearly all of the State's fresh water while protecting the islands' precious reefs from runoff and pollution. Landowners from federal, state, and county agencies and the private sector have formed island partnerships to cooperatively manage watersheds for the benefits their island's residents. Each partnership has a coordinator and a watershed-specific management plan that is guided by an overarching State Watershed Protection Master Plan.

The report finds that the sheer numbers of people being added to fixed coastal land areas, combined with the fragile nature of coastal resources, create disproportionate impacts. In many cases, these impacts are destroying the very qualities that draw people to the coast (page 108). Hawai'i, like many other coastal states, has experienced pressures on its coastal resources. Moreover, as indicated in the report, the Hawaiian Islands and many U.S. island territories are particularly dependent upon tourism for their economic health. Hawai'i attracts some 7 million tourists each year (page 107). There is a critical need to support enhanced capacity of state and local governments to manage activities that affect our coastal areas.

Planning at the watershed level is a high priority for Hawai'i. Culturally-based watershed management approaches provide a new approach that engages communities to become better stewards.

The Coastal States Organization submitted, on behalf of its coastal states membership, **a new recommendation to reauthorize and amend the Coastal Zone Management Act (CZMA) to create a Coastal Communities Program,** on October 25, 2002. We support this recommendation as this program would assist states to work directly with local governments to improve planning and management so that they balance growth and economic needs and protect critical resources. Funding for this program would begin at a minimum of $30 million per year.

Recommendation 9-1: Regarding the reauthorization of the CZMA.
We strongly support the report's recommendations to reauthorize the CZMA as it has been an important tool in Hawai'i to balance the conservation of the coastal environment with the responsible development of economic and cultural interests. Would also suggest mandating coastal zone management programs to (1) reconsider landside boundaries of jurisdiction; and (2) apply concepts of carrying capacity and smart growth concepts to planning and permitting. In addition, other elements of CZMA need to be strengthened including, habitat restoration, community planning, ocean management, watershed management and support for special area management planning.

We recommend additional funding for the program particularly if additional mandates will be placed on the program. In addition, the strength of the program has been with federal/state partnerships and the fact that programs are based upon a federally approved state plan. The recommendation needs to incorporate greater consideration of state goals and state program needs.

The report recognizes that funding for CZMA implementation remains a significant concern, having been capped at $2 million per coastal state since 1992. This hampers program implementation and should be considerably increased to effectively carry out important existing and planned program functions including the inclusion of coastal watersheds. Increased funding should be incorporated into Recommendation 9-1.

While we agree with the need for goals, performance measures and improved program evaluations for greater accountability, we emphasize that a long-standing strength of the CZMA has been the fact that the program is based on state plans. State needs and priorities should be

given utmost consideration in the development of state program goals and program performance measures. These goals need to be collaboratively developed to reflect Hawaii's unique island issues and needs. Federal money should be linked to individual program performance based incentives, and the federal government should work cooperatively with the state programs by providing the resources and technical assistance necessary to help the states achieve shared state/federal goals. The CZM programs should also be more involved with implementing federal incentives to reduce inappropriate land use and development in high hazard areas.

Recommendation 9-2: Relating to the consolidation of area-based coastal management programs.
We are very concerned that the solid foundations that each of these programs have built with their state partners could be easily eroded under this consolidation. Issues of maintaining resource levels and the integration of common, yet different missions, goals, and objectives need to be carefully examined. Also, how will resources be allocated at the state level since some states, such as Hawai'i, do not have a National Estuarine Research Reserve program, while Oregon and South Carolina have no National Marine Sanctuary Programs? Would more resources then be allocated to those states that have more coastal initiatives?

There is no indication if the consolidation is overseen by a specific agency, or whether all these programs are combined into one agency. More definition needs to be provided. The Environmental Protection Agency's (EPA's) Smart Growth Initiative should be looked at for a consolidation model if this recommendation is to be implemented. This link would provide incentives for appropriate development in coastal areas as well as showcase successes and encourage participation.

Recommendation 9-3: Regarding changes to federal funding and infrastructure programs to discourage growth in fragile and hazard prone coastal areas.
We support the recommendation that the NOC should recommend changes to federal funding and infrastructure programs to discourage inappropriate growth in fragile or hazard-prone coastal areas and ensure consistency with national, regional, and state goals aimed at achieving economically and environmentally sustainable development. Enhancing relationships between federal agencies, state coastal resource managers and all decision-makers will help to ensure compatibility among the many activities that affect ocean and coastal environments.

Recommendation 9-4: Regarding the reauthorization of the CZMA-Coastal Watersheds.
The Hawai'i Coastal Zone Management Program is taking a watershed or ahupua'a approach to viewing coastal resource management. CZM Hawaii's ongoing projects are very consistent with the report's recommendations to emphasize watersheds. There is concurrence with the overall theme and direction to incorporate a watershed approach to manage coastal and ocean resources while providing for flexibility for local variability. We agree that better financial, technical and institutional support is needed for watershed initiatives.

We generally support recommendation 9-4, which proposes to amend the CZMA and the Clean Water Act (CWA) to allow more opportunities for regional variability in management approaches. Hawaii's watersheds or ahupua'a are small; the longest stream is about 34 miles in length and streams drain directly to the coastal ocean in a matter of hours during heavy rainfall

events. This requires Hawai'i to consider watersheds as extending from stream headwaters to the coastal waters, not seaward from the upper reaches of tidal influence along coastlines, as provided for in NOAA's definition of a coastal watershed.

Chapter 10 – Guarding People and Property against Natural Hazards

Hawaii advocates that the Ocean Commission recommend the federal government adopt a consistent *National Coastal Hazards and Shoreline Management Policy* that (i) adopts a standard national definition of shorelines, (ii) establishes guidelines for making measurable improvements in protection of public health and safety from hazards, minimization of private damages; and preservation of natural shoreline features, and (iii) enhances recreational, economic and storm protective benefits of beaches and other natural features.

We further recommend that the federal government redirect government subsidies away from harmful development, including: reform the Corps to align projects with environmental as well as economic benefits; direct the Corps to focus on environmental restoration in partnership with natural resource agencies; and examine tax structures incentives for harmful development, and disincentives.

While the U.S. has had a system in place for several decades to respond to the needs of humans and their built community after a disaster, the one element that has been glaringly missing has been response to environmental impacts from natural disasters. The National Response Plan (NRP) which guided Federal Emergency Management Authority's (FEMA) lead in disaster response following a Presidential declared disaster was comprised of a series of Emergency Support Functions (ESF) which provided specific and directed responses to various aspects of disaster needs, and the lack of an ESF for natural environment response sometimes has had the affect of impeding response and thereby lengthening the time for a community's full recovery.

FEMA's role in natural hazard mitigation should be better defined now that the agency is within the Department of Homeland Security and coordinated with other federal agencies such as NOAA, U.S. Army Corps of Engineers (USACE), EPA, and others. In addition, mitigation should consider more environmentally appropriate measures such as beach and dune restoration, forestry, wetland and coral reef conservation and restoration, and beach nourishment.

Thorough attention must be directed in addressing the issue of sea level rise, global warming, and climate change especially for island settings where the impacts of these issues are more pronounced. Increased monitoring, data collection, public awareness and education, funding, and international coordination are required.

The U.S. Islands are prone to frequent and devastating natural disasters (hurricanes/typhoons, flooding, tsunami, earthquakes, volcanic eruptions, drought, etc). Recognized the shortcoming of the NRP, the U.S. All Islands Coral Reef Coordinating Committee introduced a resolution which was subsequently adopted by the U.S. Coral Reef Task Force (October 2003), calling for the Department of Homeland Security to add an ESF to the NRP (which is currently being

rewritten). That process has not been completed, and the response to the call is not yet clear. We recommend that the following be included in the report.

Recommendation 10-5: Department of Homeland Security should ensure that procedures guiding FEMA's response to natural disasters include provisions (detailed ESF) that support regional, state and local efforts to respond to the impacts on natural environments as part of the immediate and overall recovery efforts. In coastal and marine areas, the lead federal agency for a natural resource recovery ESF should be NOAA.

Recommendation 10-6: In order to ensure that responses to impacts to the natural environment following a natural disaster are conducted in the most efficient, effective, and cooperative manner, FEMA should work with state and territorial jurisdictions to develop local action plans for responding to environment impacts from natural disasters, which would assist in guiding FEMAs response capabilities.

We strongly agree that firm land use controls that discourage development near known high hazard areas should be promoted at all levels to mitigate impacts to human life, property, and the environment. Erosion mapping is needed in order to accurately identify those areas that are prone to erosion and better reduce vulnerability of development to hazards. FEMA's efforts in sustainable redevelopment should be coordinated with the CZM program and EPA's Smart Growth Initiative. The report needs also to encourage nonstructural solutions to hazard mitigation (e.g. protection and restoration of beaches, sand dunes, wetlands, and native forests).

On page 122, FEMA plays a strong role in coordinating the National Flood Insurance Program with the insurance industry. Economic market forces should be better evaluated in determining the decision to build in hazard areas.

Recommendation 10-2: Regarding the establishment of a task force to improve the collection and usability of hazards-related data.
FEMA should encourage and assist local governments in collecting and using demographic data in their hazard assessments along with actual hazard data. Information on the mobility of the population, for example, could help in developing hazard response plans while decreasing community risk.

NOAA's Coastal Services Center is already carrying out workshops on creating and coordinating tasks forces to improve the collection and usability of hazard-data. This should be supported by the NOC.

Recommendation 10-3: Regarding the NOC recommending changes to the NFIP to reduce incentives to develop in high-hazard areas.
The NOC should also develop incentives for alternative measure such as buyouts and land transfers to reduce incentive to redevelop in high hazard areas. The states need federal support to carry out buyout programs.

There is some danger in expounding on the benefits or possibilities of environmental restoration too loudly. First; it may subconsciously permit a moderated reaction to environmental damage among the general public, as one might believe that a damaged system could actually be restored to the same system it was previously. This is not the case. Replacing corals, for instance, in an area damaged by ship grounding, may result in three species being placed where fifteen species had previously co-existed. That is a change to the environment, not a restoration. The best response to damaged environments, in many cases, will be two fold. Remove the insult to the environment (sedimentation, ship, poor fishing practices, etc.), and then work to *recreate the conditions for a healthy environment in order to support natural recovery.* This approach should be noted as a preferred approach, as it allows nature to recover *naturally*, and assigns stakeholders the task of management through human induced or human caused impacts.

Through the proposed NOC, the federal agencies need to take a serious look at what constitutes appropriate compensatory mitigation focusing specifically on the creation of new wetlands as compensation for loss elsewhere. The requirement of "no net loss" of wetland habitat should continue to be supported and strengthened.

Recommendation 11-1: Regarding CZMA's authorization and funding for Coastal Estuarine Land Conservation Program (CELP)
We strongly support the authorization and providing sufficient funding for a dedicated CELP. Through the Coastal States Organization, the requested funding level is $60 million.

Recommendation 11-2: Regarding the NOC to develop goals for conservation and restoration efforts and determine conservation and restoration needs to set regional goals and priorities that are consistent with national goals.
On the surface this appears to be a very worthwhile recommendation, however, as stated previously, prevention and other mitigation options should be given the priority. In addition, this recommendation seeks to have regional goals be consistent with national goals and this is very often in direct conflict with maintaining the local ecosystem. The best example of this was the call to restore estuaries under the nonpoint source pollution program by minimizing the removal of mangroves. In Hawai'i, mangroves are an alien species and have dramatically altered the nearshore coastline on some islands. Hawai'i had to request an exemption to this guideline to meet our needs. Again, as has been stated throughout this document, all of these national and regional goals and priorities should be set based on input from the local jurisdictions.

In developing national goals for ocean and coastal habitat conservation and restoration efforts, the NOC should build on available guidelines (Estuarine Habitat Restoration Act of 1998) to ensure coordination among all related federal activities. Existing state habitat conservation priority plans should be incorporated, where applicable, into regional plans. Likewise, the development of a National Habitat Restoration Strategy should be based on regional goals in a bottom up, rather than top-down approach.

The Federal government faces serious bureaucratic challenges in this arena with respect to dredging, beach fill and other types of projects. States are only a part of that process to the extent we need federal approvals for certain projects or we are sponsoring federal projects in state waters. The report states that some of these projects take 20 years to get going (page 140). This prohibitive time frame has lead some projects to get derailed, or lead others to be independently financed (e.g., Kuhio Beach in Waikiki, Hawai'i).

The focus should be to eliminate projects that are ill defined at the on set and streamline projects that you know are critical to the jurisdiction. This requires a streamlined process. This is mentioned on page 140 as a something the USACE and EPA are working on. This is essential for local projects that are bogged down on regulatory permitting and eventually may not get completed.

Current EPA and CWA standards appear prohibitive to beach nourishment activities in Hawai'i and reflect concerns on the placement of sediment for erosion control purposes. Better national coordination of standards need to be addressed with respect to beach nourishment activities.

A part of a national strategy for managing sediment land-based sediment sources for beach nourishment should be addressed. Many sediment-starved states like Hawai'i utilize inland sediment sources exclusively because of the lack of equipment to efficiently dredge sand from offshore sources. In some states, sediment management might need to include the commercial needs of the construction industry and how this need often supersedes environmental concerns.

<u>Recommendation 12-1</u>: Regarding developing a national strategy for managing sediment. Managing sediment on a "regional basis" would not be allowable in the case of islands. Each U.S. island or island chain should have its own regional council, or access to a single regional council, as these islands are widely separated by open ocean waters. However, addressing strategic issues on a regional basis would be appropriate. In addition, defining regions among varying users must also consider the region's geography. In Hawaii's case, there are varying discussions regarding the definition of a littoral cell in order to better evaluate sand transport let alone trying to define a region. Hawai'i is also unique given our shoreline fishponds, varying wave patterns and variable benthic topography.

Please add "urban development" to the list of adverse impacts on marine environments in the second sentence of recommendation 12-1, and, to be clear that new policies are needed in coastal watersheds as well as directly along coasts, add "watershed planners" after "coastal planners" in the middle of the second sentence

Ecosystem–based management principles should address the definition of a "littoral cell" for regulatory and management purposes. The extraction of sediment offshore to a separate and distinct littoral system is very controversial and can create severe problems.

Recommendation 12-2: The USACE should ensure that its selection of the least-cost disposal option for dredging project reflects a full range of economic and environmental costs and benefits.
We recommend that the commission strengthens this recommendation by requiring the USACE to consider the non-consumptive benefits of recreation, public access, and habitat as an equal use when evaluating the least-cost disposal option.

Recommendation 12-3: Regarding the National Dredging Team implementing more ecosystem approaches, streamlining permitting, and establish sediment management programs.
Hawai'i has recognized the need to streamline the regulatory process for small-scale beach nourishment and has initiated a streamlined regulatory program that unifies the EPA, USACE, CZM and state regulatory requirements through a blanket coordination agreement. This process has illustrated the often conflicting priorities of each agency and exemplifies the need for a federal coordinating council that could help unify the goals and missions of each agency to be less conflicting.

Recommendations 12-4 and 12-5 seem to be redundant.

Recommendation 12-5: Regarding EPA developing a coordinated strategy for assessment, monitoring and research.
The EPA is currently regulating the dredging and placement of sediment within it's jurisdiction, but needs better scientific and technical resources to evaluate and develop alternative treatments, prevention and transfer of contaminated sediment.

Chapter 13 – Supporting Marine Commerce and Transportation

This chapter focuses on shipping and port issues and we generally support most of the recommendations. However, one issue that is particularly important to Hawaii's economy is the Jones Act, p. 148. Designed to protect the domestic fleet from foreign competition, the burden of higher shipping costs is not equitably shared by all U.S. taxpayers, but is unfairly placed on a small population dependent on interstate shipping via the ocean. We support exemptious to the Jones Act for Island States or island regions

Chapter 14 – Addressing Coastal Water Pollution

The one aspect of environmental monitoring that receives perhaps more attention from the press and public than any other is water quality monitoring. From ground and surface drinking water, to near shore and, to a lesser extent, open ocean water quality is reported to the public on a regular basis. Polluted water supplies and beach closures are front-page stories that the public seems to understand. But the normal process is less than satisfying for ensuring healthy ecosystems.

One problem is that the most frequently used measure for determining whether a water body or water source is impaired is based on *maximum levels of pollutants allowed for human health*

reasons. That is certainly a major concern that should be tested for and publicized, but it does not present an accurate picture of the quality of the water being tested. Establishing standards for and conducting regular testing of the *maximum levels of pollutants allowed for the most fragile element of the ecosystem* is essential. In the case of coral reefs, that element would be the corals themselves.

If weekly public reports on water quality were issued to communities for both human-related levels of quality and for ecosystem-related levels of quality, communities may tend to become less complacent about reports that rate water quality good for human needs but poor for environmental health. It is more difficult to convince decision-makers or the general public that there is a crisis or problem in water quality when the only reporting that reaches them is based on the higher tolerances acceptable to immediate human health concerns.

A second aspect of water quality that needs to be addressed in the testing procedures is the practice of basing results on water samples taken from an undisturbed water column, when many pollutants are attached to the sediments and are either taken up through the food chain from the floor, or are released in times of more severe weather or sea conditions that disturb the sediments, when sampling is less likely to occur anyway. Non-point source pollution control efforts are based on Total Maximum Daily Load (TMDL) of pollutants allowable, which would be difficult enough to test for in point source flows, and are much more difficult to even identify in non-point source receiving areas. (See page 11, Sediment Contamination and 163, The TMDL Program).

These issues are both addressed in a general way in the report, but not clearly in the recommendations. The effort for testing for environmental health that *is* within the purview of various federal agencies has been reduced according to the report, and was too limited even in the best of times. The statement on page 180, "The national monitoring network should set clear, limited goals and objectives that reflect national, state, regional, territorial, tribal and local needs" must also be adhered to, as too often the federal approach has been to use *model* approaches to be used across the board. Too often one system (often an east coast, cold water system such as Chesapeake Bay) is used to develop the federal approach or federal perspective for all systems. We recommend the following be added to the report.

<u>Recommendation 14-8</u>: EPA should develop water quality testing procedures to identify maximum pollutant levels allowable to ensure ecosystem health based on the most fragile elements of the ecosystem, and promulgate rules ensuring regular testing of both fresh and near shore waters in both the water column and sediments, and reporting the results of such tests to the public.

<u>Recommendation 14-9</u>: Federal programs for water quality testing, and the standards established for maximum levels of pollutants or sedimentation, should be based on limits for the environmental health of the specific ecosystem, and not on national average standards.

On page 155, "Management that is ecosystem-based and that considers entire watersheds will help guide this daunting task." This statement is strongly supported.

On page 159, the entire section under "*Wastewater Treatment Plants*" to Recommendation 14-1 would be clearer if the terms "existing treatment processes" and "conventional treatment plants" were clearly defined.

On page 160, under "*Septic Systems,*" "and Hawai'i" should be inserted after "The threat can be severe in places like Florida". Hawai'i is estimated to have 180,000 on-site disposal systems (septic systems plus cesspools). In Hawai'i the ground is highly permeable or has lava tubes and is close to the coast

On page 161, the entire section and recommendation under "*Animal Feeding Operations*" should incorporate information regarding USDA's 2009 deadline for the development of Comprehensive Nutrient Management Plans.

On page 163, under "*The TMDL Program*" does not make clear that the TMDL program applies only to "Water Quality Limited Segments" defined as those water bodies which do not meet state water quality standards even when all point sources are removed. The second paragraph includes a slightly different worded definition; the lack of information in the first paragraph could be remedied by moving the second paragraph to the beginning of the first paragraph.

Again, on page 163, under the TMDL section should include the point that there is funding only for the TMDL studies from EPA, and no funding for follow-up pollutants reduction programs.

On page 165, the last line on the page ignores the fact that the 2002 Farm Bill did not provide funds to United States Department of Agriculture, National Resources Conservation Service for additional staff.

On page 168, with respect to "Creating Incentives to Reduce Agricultural Runoff", several forms of incentives are suggested to encourage farmers and ranchers to follow practices that would reduce nonpoint source pollution. These practices should be made into formal recommendations.

Recommendation 14-3: Regarding states issuing regulatory controls on concentrated animal feeding operations.
The U.S. Environmental Protection Agency and U.S. Department of Agriculture research regarding the removal of nutrients from animal wastes and development of improved best management practices that retain nutrients and pathogens on agricultural lands must come **before** the states' issuance of regulatory controls on CAFOs in addition to those required by the federal government

Recommendation 14-4: Regarding the development of a comprehensive plan for long-term funding of the nation's current aging and inadequate wastewater and drinking water infrastructure.
This recommendation should include both the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund, which can be used for public water system infrastructure.

Recommendation 14-5: Regarding EPA and the states using tradable credits for nutrients and sediments as a water pollution management tool.
We are concerned about this recommendation as trading programs may be found to be counter-productive, if in the case where it is less expensive to buy credit than to improve the quality of the discharge.

Recommendation 14-6: Regarding the EPA and states should modernize the National Pollutant Discharge Elimination System.
This Recommendation should include the phrase "Congress should fund and"; otherwise it is an unfunded mandate.

The preceding description of Coastal Zone Act Reauthorization Amendments (CZARA) fails to note that CZARA has been incorporated in the federal CZMA as USC 1455(b).

Recommendation 14-8: Regarding the NOC establishing significant reduction in nonpoint source pollution as a national goal.
Coordination of federal non-point pollution programs is important; however, coordination would more likely occur if made mandatory. Additional federal technical and funding assistance to state and county governments is a priority.

Recommendation 14-9: Relating to merging Section 6217 into EPA's Section 319 program.
The thrust of the recommendation appears to be to provide for enforceable controls on all nonpoint source pollution. We agree that this would add an important tool to the CWA for reducing nonpoint source pollution. However, we feel this recommendation needs further clarification with regard to its intent regarding the extent of modification of the existing section 319, CWA, from a voluntary to a mandatory program. It also needs clarification regarding how the program would be managed. The CWA program can be delegated under the control of EPA. Is the intent that the existing NOAA Coastal Nonpoint Program is to become an EPA program that can be delegated? Perhaps the intent could be achieved by cross-referencing the programs in both the CWA and in the federal CZMA.

The CWA 319 program has always promoted voluntary pollution control, and the CZARA legal requirements appear to be stricter than those in CWA 319(h). The text for the recommendation says that both programs have positive attributes that, if combined, could more effectively address nonpoint sources of pollution. The text also states that incentives and enforcement techniques will be needed to insure progress. We would appreciate a clarification what the Commission has in mind. What are the positive attributes, and how might incentives be provided? We are still reviewing this particular recommendation and have not yet taken a position on this proposal. Hawai'i remains concerned about unfunded mandates.

Recommendation 14-10: Regarding providing authority under CWA and other applicable laws for federal agencies to impose financial disincentives and establish enforceable management measures.
This recommendation appears to be proposing that disincentives in the form of reduced federal funding to states is an appropriate compliance mechanism and ignores the fact that states often do not have control over private activities. An assessment of the economic impact of

encouraging farmers to reduce crop yields by reducing fertilizer applications must be carried out in addition to assessing environmental impacts.
The recommendation implies that all private activities that have the potential to produce nonpoint source pollution should be under state control. While it is doubtful that this is what was intended, we suggest that the following language be added to the recommendation: "This recommendation is not intended to imply that states are expected to control all private sources of nonpoint source pollution but rather that state laws and state programs, to the extent of available funding, are expected to take all possible measures to meet their water quality standards."

The recommendation suggests authorizing federal agencies to impose disincentives as an appropriate course of action if states do not make meaningful progress in water quality standards attainment. While this is logical in the context of the report, Hawai'i is concerned about any financial penalty and how it might be applied. Nonpoint sources have complained to us about having new duties without any new resources. We ask for more detail.

Recommendations 14-11, 14-12, and 14-13 are strongly supported. All three recommendations would greatly improve the possibilities of truly reducing nonpoint source pollution. Increasing federal technical assistance and information needed for state and county governments to make sound land use decisions to protect coastal water quality is important. Federal funding should also be made available.

Recommendation 14-14: Regarding the EPA, states and watershed groups explore approaches for managing atmospheric deposition, particularly when it affects water bodies far from the source.
This recommendation should be worded more assertively by specifically naming mercury as a major air pollutant of concern. The accompanying paragraph does mention that mercury deposition leads to fish tissue contamination, requiring urgent international action. We suggest rewording (new text is bolded) as follows: "The U.S. Environmental Protection Agency, states, and watershed groups should explore air pollution controls and regional approaches for managing toxic outcomes of atmospheric deposition, **such as airborne mercury contamination of fish tissues,** particularly when it affects water bodies in states far from the sources."

Chapter 15 – Creating a National Water Quality Monitoring Network

We agree that a standardized, national water quality monitoring network would be very useful for understanding trends in water quality across regions in the continental U.S., but must point out again that geographically isolated islands, such as the Hawaiian Islands, must be explicitly accommodated in a national network by a statement that stresses differences in scale, climate, temperature regimes, and limited fresh water resources, compared to many mainland areas.

Chapter 16 – Limiting Vessel Pollution and Improving Vessel Safety

Recommendation 16-11 suggests that research and development of engines that are less polluting would be of great benefit to Hawai'i. For example, on the west coast of the island of Hawai'i we recently issued enforcement warnings against a cruise ship for unlawful engine emissions from its passenger shuttle boats.

We strongly support Recommendation 16-8, which promotes increased federal funding to finance pump-out facilities.

The Oil Pollution Act of 1990 should be amended to allow for flexible responses to remove abandoned/grounded vessels from coral reefs and to include among mitigation measures, off-site mitigation. The same for presently permitted activities of the USACE. If the reason a reef was damaged was due to a vessel running aground, putting up navigational aids makes more sense than trying to take fragments from a healthy area to place back into a damaged area. Many transplantation efforts to date have failed, and have resulted in damage to 2 sites instead of one. Coral cultivation (from larvae) provides an opportunity to have seed material of local genetic types without harming livestock.

Chapter 17 – Preventing the Spread of Invasive Species

The report did a good job in relaying the difficulty in dealing with invasive species. Stopping the transfer of invasive and alien species may be the easiest component in the process, while early detection of an alien species and its eradication or control will be much more difficult.

Hawaii has taken an ambitious step forward in dealing directly with local invasive species issues. The 2003 State of Hawaii Legislature authorized the creation of the Hawaii Invasive Species Council (HISC) and stated "the silent invasion of Hawaii by alien invasive species is the single greatest threat to Hawaii's economy, natural environment, and the health and lifestyle of Hawaii's people and visitors." The continued support for implementation by myself as Governor provided the institutional framework for leadership and coordination in acting on a statewide invasive species prevention and control program. The HISC has active participation and support by several State cabinet level positions. In 2004, the State of Hawaii Legislature provided $4 million in funding for administrative request to implement the Council's programs.

The HISC has adopted a working document as a strategic plan, which incorporates four approaches to invasive species. These approaches are prevention, response and control, research and applied technology, and public outreach. Through these approaches, established workgroups actively provide direction for Hawaii's invasive species issues.

This funding is a significant increase to invasive species funding within the state, although it will not be adequate to handle the continuing invasive species issues. Due to this fact, the HISC has requested that the $4 million in state funds be matched 1:1 with federal and community funding. Hawai'i has taken boldly stepped forward in dealing with invasive species both through the creation and funding of the HISC and the recent national approval of its Aquatic Invasive

Species Management Plan. The State will need continued assistance and support from the federal government to implement its plans.

The report discusses the six regional panels that were created by the Aquatic Nuisance Species (ANS) Task Force (ANSTF) to "limit the introduction, spread and impacts of aquatic nuisance species in their waters". There is a little picture of Hawai'i in the box with Alaska, in Figure 17-2, but Hawai'i is not listed as being in the western region.

The regions seem to overlap and are confusing to distinguish. There should be a Pacific region that includes Hawai'i and all the U.S. affiliated Pacific Islands. This is important to the way aquatic invasive species are dealt with in a coral reef environment.

Hawai'i is also an emerging as a leader in ANS. This past year, Hawaii's comprehensive management plan was approved by the ANSTF. Hawai'i is establishing a program and facility at the UH Hawai'i Institute of Marine Biology to focus on research on marine invasive species. Funding to develop the infrastructure for this facility has been allocated.

Even though a pathway may have a slightly lower risk, it only requires one organism to make its way to someplace before causing trouble. There should be more discussion on each pathway: navigational buoys, drilling platforms, marine debris, and other ship related activities.

The pathway of global trade in marine organisms should be discussed in greater detail. Although this is a major pathway, the components of this pathway are very different. For example, dealing with the trade in marine or freshwater animals for aquarium is a much different pathway than the mass culture of organisms in the costal environment. In addition, the sell of animals for food or bait are also different. This area is diverse enough, that these components should be broken down.

The report lists several pathways (shellfish importing, aquaculture, aquarium, horticulture, pet industry), but these are skipped right over and the focus becomes education in the development of recommendations. Education/outreach are very important, but there should also be some focus on these various pathways, and perhaps a discussion on how such pathways can be regulated. In the paragraph before recommendation 17-3, it says that "some industry representatives have expressed concern that efforts to ban unwanted species and otherwise prevent introductions of non-native species may interfere with the flow of free trade and the need to protect public health and ecosystems will have to be balanced against these individual interests".

Congress should recognize the contributions made by state participants and reauthorize the ANSTF. Both NOAA and USDA should be included in the ANSTF, and ANSTF efforts coordinated with the proposed NOC to address marine species rather than creating a duplicative role for the NOC in the regulation of ballast water and in the control of invasive species. This coordination should be noted throughout the recommendations.

The International Partnerships section, talks of ".key commercial sectors to develop voluntary codes of conduct and other self regulatory mechanisms". In our experiences, these types of

voluntary efforts don't seem to work, and if there is a serious concern regarding invasive species, these should be mandatory, not voluntary.

It appears that no one or even small number of answers will suffice in dealing with the spread and control of invasive species, but instead the problem will require a plethora of approaches simultaneously. One possible approach, at least for macro species, may be the enlistment of help that already exists within the user groups. Divers and fishermen are generally aware of their environment and are the first to recognize species that may not belong. Programs should be established which provides for educating these groups, to train them to look for the unusual, and a forum for reporting their findings. Hawai'i has already initiated with approach to deal with the spread of alien algae on the reefs. This one step could help to provide that *early warning* in some cases that will allow control actions to proceed.

Recommendation 17-4: Regarding establishing a national plan for early detection and rapid response.
We should strongly support this section and its recommendation. We are currently working on this type of system and increased funding is very important. We recommend that bullet 5 be amended to read: **Develop partnerships among government, industry and user groups to fund and implement response actions, to include; education and educational material development for groups which can provide consistent "eyes" for species or ecosystem change, and a reporting system that will allow that information to be gathered and compiled and analyzed science and resource managers familiar with that specific ecosystem.**

Recommendation 17-5: Regarding streamlining the proliferation of federal and regional programs and developing coordinated plans for controlling introductions.
We also strongly support this section and its recommendation. Hawai'i has had a long history of intentional and unintentional releases that have resulted in established species and not established species. Hawai'i could serve as a good site to investigate the effects of intentional introductions on a coral reef environment.

Recommendation 17-7: The NOC should develop an interagency plan for research and Congress should increase funding.
We also strongly support the recommendation for increased funding for research into invasive species and how its can apply to monitoring and prevention. One of the priority research goals should be related to recommendation 17-4 (detection and response). This includes the first bullet (gathering baseline taxonomic information and strengthening taxonomic skills.) as well as developing a system of early detection and notification of all appropriate agencies.

Chapter 18 – Reducing Marine Debris

Most international maritime laws are regulated by the International Marine Organization (IMO), of which the United States is a member organization (joined 1950). However, in the pacific, much of the derelict fishing gear can be attributed to non-member countries. This would suggest the pressing need for the federal government and marine debris responsible agencies to closely

partner with the Coast Guard to contact the IMO about these non-affiliated countries and to get them to join.

We strongly recommend that land generated litter be addressed separate from derelict fishing gear since they both are very distinct issues with specific causes and remedies.

Public education campaigns are mentioned under education and outreach, however targeted campaigns at the local level would be more effective. We suggest studies be conducted to determine who is the most likely to litter in order to direct resources and outreach campaigns to those groups while emphasizing penalties and enforcement of litter laws.

Recommendation 18-2: Regarding the re-establishment of an interagency marine debris committee.
Instead of establishing an interagency marine debris committee nationally, there needs to be some thought given to establishing bi-coastal regional committees (one already exists in Hawai'i for the multi-agency marine debris cleanup for the NWHI. In Hawai'i, EPA and the Navy do not participate in the multi-agency cleanup. However, NOAA and the Coast Guard are active participants.

As noted in the section on "Working with Communities" on page "people have not made the connection between actions taken far from the coast." It harkens back to the theme of the opening chapters of this report, which spells out the lack of public awareness of the benefits of the oceans to the lives of all Americans, and reflects the larger problem of a lack of awareness of our connection to our environment, or our impacts on it. We recommend a bullet follow 18-2 as follows: **Public education efforts should clearly demonstrate the correlation between actions far inland with impacts on the coast and in marine waters.**

Recommendation 18-3: Relating to the development of a detailed plan of action to address derelict fishing gear.
Hawai'i already has a coordinated, multi-agency effort to remove derelict fishing gear in the NWHI, which may be a potential model for elsewhere. This recommendation should emphasize the need to provide more resources to existing derelict fishing gear removal and marine debris clean-up efforts.

In terms of the problems of derelict fishing gear, one possible solution is not spelled out, and that is in a program to mandate net identification. Both at the national and international levels, requirements by law or treaty that require all nets bear ownership identifications that cannot be removed would help to identify parties that should be responsible for funding recovery, and may help to ensure that owners of nets are more prudent in net retrieval. In this regard, we suggest a bullet under Recommendation 18-3, as follows: **This should include development of a net identification system in order to identify the culpable party in funding derelict net retrieval and, in some cases, environmental restoration costs. We also recommend working with IMO to require tracking devices on fishing gear and have ships call in coordinates of abandoned gear.**

A recommendation to amend MARPOL Annex V which specifically refers to the prevention of pollution of garbage from ships to specifically include discarded fishing gear should be advocated. Discarding of fishing gear is a safety issue for ships at sea. In this regard, ships at a minimum should be required to report the coordinates of the location where nets are cut loose so that insurance companies and flag-countries involved in a coordinated effort can recover the nets before they become a hazard.

Recommendation 18-4: Regarding NOAA promoting a public-private partnership program and incentives to removal and disposal of derelict fishing gear.
Derelict fishing gear is comprised of both whole nets and large sections of net that are cut away when torn and discarded overboard when the net is patched. In addition, there is significant amount of line, plastic used in traps and attached to nets, etc. Incentives are needed to minimize the practice of throwing unwanted nets or net pieces overboard. This should include considerations of a deposit on the nets when the nets are purchased.

Chapter 19 – Achieving Sustainable Fisheries

We are surprised that the guiding principles that are so much a part of the rest of this document are generally overlooked or not considered in this chapter. There is no discussion of how the regional fisheries councils are to interact with or become a part of the regional ocean councils proposed in the beginning of this document, or how these bodies interact with locally driven community-based groups. The linkages between fisheries impacts and management plans and impacts from other sources are not made. Using an ecosystem-based approach to interconnect between fisheries management and other management initiatives is not discussed. Lastly, using recognized ecosystem-based approaches to managing resources, such as MPAs, is completely ignored.

Subsistence fisheries are also not mentioned at all in this chapter. NOAA has had difficulty in adequately defining or addressing the needs of subsistence fisheries, and in the Pacific, these are important sectors. There should be inclusion of discussion of how to manage subsistence fisheries in the Sustainable Fisheries chapter.

Recommendation 19-1: Regarding strengthening the scientific role of the Scientific and Statistical Committees (SSC).
This recommendation conflicts with the way that the Western Pacific Fisheries Management Council (WPRFMC) runs their plan teams. In the WPRFMC case, the plan teams are composed mainly (or entirely) of scientists or agency staff who prepare the status of stocks and fisheries reports for their covered fisheries. The SSC is composed of both non-agency scientists and agency representatives. The non-agency scientists do not have access to the raw fishery dependent data that would be necessary to perform the stock analyses and if they were required to do so, most non-agency SSC members would be hard pressed to do this because it is not part of their job. There are also issues of data confidentiality.

The non-agency SSC members are the "rocket scientists", the ones who are among the top fishery modelers in the Pacific region. If they were tasked with doing the stock assessments,

which are not a part of their current responsibilities, they would need to funded to do so. Instead, the Report would be better off specifying the roles and composition of the plan teams and make the plan teams responsible for scientific analyses and stock assessments, and have the SSC provide strict review and oversight of the process. The plan team members are usually the biologists from their federal/state/local agencies who collect and analyze the data within their region and their fisheries. If only the SSC were tasked with the assessment, who would review their work?

Compensating all SSC members could be problematic. In Hawai'i, many are NOAA scientists, and already are being compensated during their time spent at council meetings as part of their job. There is simply not the population base in the Pacific to have enough independent non-agency scientists to completely staff an SSC.

Specifying that the NOAA Administrator review the SSC member candidates would make this a very lengthy, cumbersome and potentially political process. The NOAA Administrator and/or the Secretary of Commerce already select Council members.

Recommendation 19-2: SSCs should be required to supply the councils with information necessary to make management decisions.
It would be burdensome and inefficient to expect that a single body (SSC) perform the stock assessments and provide harvest limits for all the fisheries under each council. The specialists for each fishery (as embodied on the plan teams) should be doing this work, while the SSC can review and monitor the science that goes into the assessments. What is lacking is accountability. Charging the SSC with making "allowable biological catch based on the best available science", is a good goal, but may give this group an excuse because the best available science isn't always sufficient to set harvest limits.

Recommendations from the SSC are incorporated into the decision-making process of the council, while the SSC recommendations are heard; they are simply given less weight in the entire decision-making process than other considerations (i.e. economics). This recommendation should consider making changes to the Fishery Management Plan development process, which requires the councils to explain why science-based recommendations were not considered as the primary rational for allocation.

Recommendation 19-3: Councils should be required to set harvest limits at or below the allowable biological catch as determined by the SSC.
We would word this recommendation to read "no higher than the allowable biological catch as determined by the plan teams and reviewed by the SSC."

Recommendation 19-4: National Marine Fisheries Service (NMFS) and councils should develop a process for independent review of data generated by SSC.
We support the concept of independent review of the plan teams/SSC work, but how would this be implemented in a timely fashion so management decisions are not fraught with delays? The council usually meets within a couple of weeks after the SSC meeting, and if the council members are to receive an independent review of the SSC's work, how are they going to get it in time?

This recommendation is somewhat reversed in its logic; it is not the SSC that generates scientific information, but rather the SSC receives it and then evaluates the data based on scientific merit. An independent peer-review process is a good idea. However in order for it to work, it needs to be truly independent it needs to be performed concurrent to the SSC process, or ideally beforehand so that the SSC receives the benefit of the information from the peer review process, and finally, the peer reviewers will need to be compensated independent of the council process.

Recommendation 19-5: Council should set a deadline for its SSC to determine allowable catch.
Setting appropriate deadlines is fine, but to accomplish this task NOOA needs to ensure that the groups that are tasked with meeting the deadlines have adequate support, resources, and expertise to meet those deadlines. Usually allowable catch recommendations come from the plan team. The SSC then validates (or invalidates) based on data and the arguments presented to them. They either support or refute the plan team recommendation. As such, all phases of the decision process should have a timeline. However, work to create the federal regulation often takes the most time, and is of no fault of either the plan team, or the SSC, or the council.

Recommendation 19-6: Once allowable catch is determined, the council should propose a management plan in time for adequate review and approval by NMFS.
The level of federal support for the councils has not provided adequate resources to meet set deadlines. In the case of the western Pacific, it is usually NOAA that has caused delays in implementation of fishery management plan amendments. This recommendation would penalize commercial fishers for lack of timely government action. Although this might provide incentives for commercial representatives on Regional Fishery Management Councils to push for timely action, the penalty should not be placed on all commercial fishers if the council does not respond.

If timely action is the goal, another method should be used, such as legal deadlines for production of management plans, with penalties placed on the managers, not the public. This recommendation is not realistic. As stated above, sometimes it is the government that delays review and implementation. To stop fishing while they perform an evaluation of a management plan would put most fisheries out of business.

Recommendation 19-7: Councils and their SSCs should develop annual prioritized list of management information needs
NMFS has not usually been able to meet all data needs that the council has requested. How is this annual list to be funded? It is easy to come up with the list but without adequate support, it becomes a just another exercise in list making.

Recommendation 19-8: Regarding the establishment of a saltwater recreational fishing license.
We oppose this recommendation; saltwater recreational fishing licensing would likely be very unpopular in Hawai'i. We are glad to see that the report is taking recreational fishery data collection more seriously. However, the licensing of saltwater fishers and the collection of data should not necessarily be tied together as suggested in recommendation 19-8. There are ways to get the recreational data that do not require licensing. If this is instead a tax to pay for management programs, then that should be clearly stated.

The State of Hawai'i has, in the past, tried to implement a recreational saltwater license with no success. Our evaluation of the costs associated with the implementation of a recreational fishing license, would mean that each license would need to be purchased for about $20.00. There has been insufficient support from the community for this.

We agree that the marine recreational fisheries statistical survey protocol is good for long-term trends, however, it is not as suitable for real-time, detailed catch and effort data collection. For that, you need mandatory data collection, logbooks, or an army of port and shoreline surveyors/monitors.

Recommendation 19-9: Congress should increase support for an expanded research program that is regionally based.
We strongly support this recommendation.

Recommendation 19-12: Regarding the Governor selecting two council candidates each from the commercial, recreational and general public sectors.
We are uncertain about the advantage of requiring the Governor to appoint two council candidates each from the commercial, recreational, and general public sectors for each vacant council seat. No doubt noncommercial candidate-types lose opportunities to be selected, or are not as willing to give of their time as the stakes are not as high for them. Overall composition of the council should also be viewed in terms of proper weighting (by candidate-types), and candidate should be selected as the state's representative from the category that would achieve that balance.

Recommendation 19-13: Congress should give the NOAA Administrator responsibility for appointing council members.
On what just criteria is the Administrator supposed to rate the nominees? We are not clear if this is to be done with input from the state. The states need to be a part of the decision making process.

Recommendation 19-14: Regarding training for new council members.
We agree that council members should get some training. However, that training should be done with the convenience and logistics of the members in mind. Don't make the council members from Hawaii, Guam and CNMI fly all the way over to DC to get this training, again set the training up based on a regional approach.

Recommendation 19-15: Regarding Congress amending Magnuson-Stevens Fishery Conservation and Management Act to institute dedicated access privileges.
We do not believe that amendment of the Magnuson-Stevens Fishery Conservation and Management Act to authorize dedicated access systems is needed. Such authority already exists. Implementation of such rules should be limited to unusual circumstances related to isolated stocks with severe over-capitalization of fleets. An amendment could encourage inappropriate and unfair application of this approach with no benefit to the resource. Good science based management should provide greater opportunities for fair allocation of resources to the fishing public, not privatization by individuals for public resources that in the long-run could be self defeating.

Recommendation 19-18: NMFS and U.S. Coast Guard should strengthen cooperative enforcement efforts at the unified fisheries enforcement plan.
This recommendation should include the states and territories as well. Management and enforcement concerns of the states do not end at an arbitrary three-mile limit unrecognized by fish or other mobile species. In many cases, it is the states that collect the fisheries data and do the majority of the dockside enforcement in cooperation with the U.S. Coast Guard and the NMFS.

Recommendation 19-19: Increase enforcement by requiring the use of vessel monitoring systems (VMS).
While we do not disagree that increasing the use of VMS will likely increase enforcement capacity, there is still a need to staff and train people to monitor the system. There is also the need to provide the resources to the state fishery enforcement agencies to purchase and monitor the system. Currently all monitoring is done by the USCG. If the government requires the use of VMS, resources should be made available to the industry to buy these units.

Recommendation 19-22: NMFS and the councils should develop bycatch reduction plans based on an ecosystem approach.
NOAA should clarify the definition of bycatch so that live released fish are not considered bycatch and hence, subject to reduction. Instead, they should be encouraging live release, whether tagged or not, in both commercial and recreational fisheries.

Generally, we support the international recommendations.

Chapter 20 – Protecting Marine Mammals and Endangered Marine Species

Humpback whales, spinner dolphins, Hawaiian monk seals and other marine mammals are treasured by Hawaii's residents and visitors alike. In terms of economic value, Hawaii's whale-watching industry alone generates more than $30 million per year in local revenues. From a cultural perspective, marine wildlife, such as spinner dolphins, are revered as *`aumākua* (ancestral deities) by Native Hawaiians.

The State of Hawai'i has a history of productive collaboration on marine mammal conservation with NOAA and other federal agencies. Probably the best example of such collaboration to date is the federal-state partnership that co-manages the Hawaiian Islands Humpback Whale National Marine Sanctuary. Through the sanctuary's issue-driven research projects and community-based education and outreach activities, Hawaii's ocean-users are learning to productively coexist with a growing population of humpback whales in Hawaii's nearshore waters.

We find the discussion and recommendations presented in Chapter 20 to be generally salient and useful, and we briefly review our comments on each recommendation below. Before proceeding, however, we would like to ask the commission to consider two additional recommendations. One recommendation is directed toward improved ocean conservation through public education. The second suggested recommendation is meant to clarify state authority to protect marine mammals.

Regarding improved public participation in marine mammal conservation, there appears to be no specific recommendation in Chapter 20 regarding education and outreach. We would like to point out that most instances of marine mammal harassment or injury are unintentional, and that collaborative efforts, such as those undertaken by the Hawaiian Islands Humpback Whale National Marine Sanctuary, show that most harassment can be avoided through enhanced public understanding of marine mammal vulnerabilities and improved knowledge of safe vessel operation in marine mammal habitat. We would therefore suggest that an additional recommendation be added to Chapter 20 stating that **NOAA should further enhance and expand its education and outreach efforts regarding marine mammal (and sea turtle) conservation**. The recommendation should specifically urge improved collaboration on education and outreach between the NMFS, the National Marine Sanctuaries Program, and state wildlife management agencies, all of which share jurisdiction and/or public trust interests in marine protected species conservation.

Regarding state authority, we believe that it is very important that the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) be amended to clarify the authority of states to protect marine mammals. We request that a new recommendation be added to Chapter 20 to reflect this.

Our understanding at present is that the NMFS interprets section 109 (a) of the MMPA such that no state may enforce any regulation "relating to the taking," of a marine mammal, even if the regulation is intended to protect, e.g., restrict take, of a marine mammal. For instance, the NMFS has advised us that, under the current MMPA interpretation, the State of Hawai'i has no authority to restrict "swim-with" dolphin tour activities for the purposes of protecting spinner dolphins. We have been told that any local authority to protect these animals is pre-empted by federal law, i.e., the MMPA.

While we understand that the MMPA was meant to prohibit state governments from authorizing marine mammal take, we do not believe it was the original intent of Congress to limit state authority to protect marine mammals, i.e., to prohibit take, via the MMPA. We would therefore like to see the Act amended to give Hawai'i and other states the option to pass state laws and regulations aimed at reducing take and otherwise protecting locally important marine mammals.

Additionally, we recommend that Section 17 of the ESA be amended to clearly state that a more restrictive provision regarding marine mammals, i.e., more protective or limiting on take, of either the ESA or the MMPA takes precedence over any less restrictive provision of either statute. Currently, Section 17 of the ESA states that any more restrictive provision of the MMPA takes precedence over any less restrictive provision of the ESA. We believe that this section should be revised to make clear that the reverse is also the case, i.e., any more restrictive provision in the ESA takes precedence over any less restrictive provision in the MMPA. (In Section 6 (f) (2) of the ESA, states are given authority to enact laws that are more protective of listed species than federal law, but in light of Section 17 of the ESA, there appears to be the possibility of more than one interpretation of state authority to enact stricter measures for ESA-listed species when these species also happen to be marine mammals.)

Recommendation 20-1: Regarding making Marine Mammal Commission work through the NOC

Hawai'i has a history of productive collaboration with the Marine Mammal Commission. For example, in October 2002, the commission took the lead in holding a workshop on management of Hawaiian monk seals in the Main Hawaiian Islands. The workshop was very helpful in bring various agencies and community groups together to discuss the opportunities and challenges of managing the growing monk seal population in the main islands. The recommendations that resulted from the workshop continue to guide our efforts to foster a peaceful coexistence between this endangered seal and Hawaii's ocean-oriented residents and visitor industry. If recommendation 20-1 is carried out, we hope that there would be no adverse impact on the productive, direct collaboration that has developed between our state and the commission.

Recommendation 20-2: Regarding taking away USFWS authority over marine mammals

This recommendation would probably have little effect in Hawai'i, since all marine mammals here are under the authority of NMFS. If recommendation 20-2 is enacted, we would only hope that the NMFS budget is increased accordingly to cover the added responsibilities.

Recommendation 20-3: Regarding how the NOC should improve coordination between NMFS and U.S. FWS on endangered species conservation, especially with anadromous fish and land-based activities.

Our state has worked effectively on sea turtle conservation with both NMFS and the USFWS. In the NWHI for example, where the USFWS manages the NWHI National Wildlife Refuge and the Hawai'i Department of Land and Natural Resources manages the Kure Island State Wildlife Sanctuary, we have worked together effectively on sea turtle conservation across jurisdictional and geographic boundaries. In the main islands, on the other hand, our state agencies work extensively with NMFS in responding to injured and entangled turtles. Nevertheless, implementing recommendation 20-3 to further enhance inter-agency coordination via the council could be helpful, provided that the agencies would be compensated for any associated increases in human resource commitments or budgetary requirements.

Recommendation 20-4: Regarding requiring NMFS to more clearly specify MMPA permitting requirements.

We support this recommendation.

Recommendation 20-5: Regarding requiring NMFS to revise the meaning of harassment to cover only activities that "meaningfully" disrupt behaviors that are significant to survival.

We generally support both of these recommendations. While we wonder whether or not the necessary scientific information currently exists to determine what behaviors are "significant" to survival and reproduction, we support the general intent of these recommendations.

Recommendation 20-6: Regarding how NMFS and USFWS should implement programmatic permits for certain activities to save time and resources for case-by-case permit review of other activities that have more serious possible impacts.

Hawai'i generally supports this recommendation. We have a long history of productive collaboration with the permitting divisions of NMFS and USFWS, but if their resources could be used more effectively via implementation of programmatic permits, we would support this

change, especially if this resulted in enhanced communications during the early phases of the permitting process.

Recommendation 20-7: Regarding how NMFS and Department of the Interior should expand research, technology and engineering to mitigate adverse human impacts.
We support this recommendation. Open ocean aquaculture and high speed ferry operations are examples of two new activities expected to increase in Hawaii's waters, for which possible adverse impacts on marine mammals and sea turtles do not appear to be adequately understood. Federal assistance in better evaluating and mitigating these and other potential impacts would be quite helpful.

Recommendation 20-8: Regarding increased funding for ocean acoustics research.
We also generally support this recommendation. The role of humpback whale song, for instance, is not yet clearly understood. We believe it is important to better characterize Hawaii's marine acoustic environment in order to evaluate possible impacts on humpbacks and other marine mammal species.

Recommendations concerning ocean acoustics and marine mammals (especially 20-8 and 20-5) could conflict and may affect ocean research in Hawai'i. For example, a group of academic and government laboratory investigators has developed a proposal for an acoustic ocean observatory along the west coast of the island of Hawai'i, for the purpose of studying marine mammals and large pelagic fish. This research is crucial to better understanding of these species, and constrains by regulation of ocean acoustics should be carefully weighed to ensure that impacts to the species are minimized and yet data that may be important to the understanding of the animals can be obtained.

Chapter 21 – Preserving Coral Reefs and Other Coral Communities

There is no federal law that explicitly states it is illegal to kill corals or damage coral reefs, except within federally protected areas. Activities that affect coral reefs can be regulated, but inefficiently. For example, the specific reading of the EPA regulations would allow a variety of individual water quality standards to be met, but the "soup" would still kill corals or prevent recovery. A unified federal policy that would respect the legal authority of the states and territories would be a big help: "It is unlawful to undertake activities that result in the death of corals and coral reefs except as permitted under local authority." This would actually backstop local regulatory agencies.

Under Federal Roles and Responsibilities page 263, the Rivers and Harbors Appropriation Act (RHA) of 1899 Section 10 is not listed as a federal law used to manage and protect coral resources. Under this Act the USACE must authorize any excavation or fill of navigable waters. RHA Section 10 is broadly used to authorize removal of corals that obstruct navigation for purposes of expanding and deepening channels, turning basins, and harbors. At minimum, the RHA should be changed to require avoidance, minimization, and mitigation of impacts to corals, parallel to CWA Section 404, which regulates fill in waters of the U.S.

The U.S. bans collection of corals from reefs under federal jurisdiction for the aquarium trade, however, is the number one importer of corals from Indonesia and the Philippines. The technology presently exists for the cultivation of corals from eggs and sperm released during spawning events. The U.S. can take the lead in promoting coral cultivation for the aquarium trade and phasing out the importation that is damaging others' reefs. This is further discussed under Recommendation 12-3.

Recommendation 21-1: Regarding Congress passing, and providing sustained funding for a Coral **Reef** Protect and Management Act that covers research, protection, **management** and restoration of coral **reef** ecosystems.
Our first recommendation is to change recommendation 21-1 to read with the suggested edits that are **bolded** in the text above. The emphasis of a Coral Protection and Management Act (CRPA) as described is primarily on research and mapping, which does little to protect coral reefs from imminent threats. A CRPA must explicitly emphasize actual management, protection and restoration. It should provide sustained funding for local jurisdictions to manage and protect their reefs and encourage local protection initiatives. It should also assure funding for coral reef protection where the authority lies outside of NOAA (for example, authority for pollution control lies with EPA and Department of Agriculture; authority for dredging and fill lies with the USACE). CRPA should mandate protection of coral reefs and require improved compensatory mitigation where impacts are unavoidable.

Recommendation 21-1 calls for a *coral reef protection and **management** act*, but then does not follow up with any provisions for management and established funding for management. The purpose of the current U.S. Coral Reef Task Force is centered around science-based management, with management being the operative word. The current funding is subject to and annual (deliberate) inclusion in NOAAs budget, rather than from an established and permanent funding source. We recommend the following bullet be added to recommendation 21-1: ***Congress should provide funding and technical support for locally driven management of coral reef ecosystems in the U.S. coral reef States and Territories***.

We recommend that the some of the other bullets in recommendation 21-1 be changed as follows:

- *support for new research and assessment activities to fill critical information gaps, to be carried out in partnership with the academic research **community and with the resource trustee agencies in the states and territories***
- *support for outreach activities to educate the public about coral reef conservation, **ecosystem function**, and reduc**ing** human impacts.*
- *support for U.S involvement, particularly through the sharing of scientific and management expertise, in bilateral, regional, and international coral reef management **and education** programs.*

Recommendation 21-2: Regarding Congress codifying and strengthening the U.S. Coral Reef Task Force and place it under the oversight of the NOC.
In regard to the recommendation that the U.S. Coral Reef Task Force be codified, we do have concerns that the Task Force's role within the framework of the NOC may weaken the Task Force by allowing Task Force membership to be relegated to lower echelon persons within the

federal agencies. We support language, which would keep the federal agency representation to the Task Force at the Assistant Secretary level, and the co-chairs at the Secretarial level. Codification should include mention of the membership by the Governor's on the Task Force.

We also have serious concerns about the inclusion of deep-water corals within the framework of the Coral Reef Task Force. As its name implies, the U.S. Coral Reef Task Force focus was intended to be on reef-building corals, and while some deep-water corals may be associated indirectly with reef building corals in tropical areas, the broad inclusion would work to weaken the primary focus and goals of the Task Force. These benthic communities, the management challenges and the impacts are so diverse that the analogy would be the inclusion of a grassland ecosystem to a Task Force focused on tropical rainforests just because they are both examples of plant-based ecosystems.

We believe that deep-water corals are a concern and should be addressed, but great care must be taken in selecting the proper venue for their attention. Management of deep-water corals are first and foremost, a fisheries issue. Deep-water corals require different management regimes, different science, and are generally associated with completely different ecosystems than coral reef system (the possible exceptions being deep water corals in proximity with tropical reef systems). The following wording, as is being offered as an amendment to the bullets in recommendation 21-2. Delete bullet 1 and replace with: **The Task Force shall create a sub-group to address the issues of deep-water corals to determine the proper, existing venue for management attention.**

Hawai'i has had a long history of managing deep-water corals (or precious corals). Destructive harvesting techniques are not allowed, and the fishery is tightly controlled. The deepwater (Red, Pink, and Gold Coral) fishery is dormant; however, if this fishery is initiated again, it will be managed by both federal and state agencies. Currently, there is an active fishery for Black Coral in the State of Hawai'i. Black Coral lives on the deep coral reef also known as the coral reef twilight zone. This fishery has been successful for 40 years and is now undergoing some changes due to fishing pressure and an invasive species.

Hawai'i is extremely unique in that it allows the harvesting of these corals. The management of these fisheries is monitored closely and tightly regulated. Any national movement to protect deepwater corals should consider Hawaii's unique situation. These fisheries have been managed successful and the protection of these corals in Hawai'i was recognized many years ago.

We support the general protection of deep-water corals and their communities. We need to stress the information gap that exists on the benthic community that lies in between the environments of reef building corals and deep-water corals. The deep coral reef (or coral reef twilight zone) may play a critically important role on the health of the coral reefs around Hawai'i, in particular the Main Hawaiian Islands. We know very little from this environment even though it is only a few hundred feet deep (200 to 500 feet). This zone is the transition zone between warm water coral reefs and abyssal, cold waters.

Regarding the bullet that recommends the Task Force develop regional-ecosystem based plans; **we would recommend that the states and territories be included in this bullet**. The

development of regional plans should include both researchers and resource managers from the region. Each plan should encompass the range of coral reef ecosystems predominant within the region and should include standardized ecological components (i.e. trophic structures, symbiosis, nutrient and chemical cycles, keystone species, levels of endemism, phase shifts, etc.) where this data is available and applicable to the plans.

The bullet that states "NOAA, in consultation with Regional Fishery Management Councils, should implement any Task Force recommendations for reducing the effects of fishing on coral **reef ecosystems,"** must be changed to add in the role of the states and territories. The vast majority of coral reefs are in State waters and the majority of the fishing impacts to the reefs are from nearshore fishing activities.

Recommendation 12-3: Regarding NOAA developing national standards and promote international standards to ensure that coral reef resources are collected, imported and harvested in an **ecologically** sustainable manner.
The standards should include concerns regarding the transport, possession, culturing, sale or release of non-native species from one region to another where such species could cause an invasive species risk to the local reefs, and or where invasive species are already present and the goal is to stop the further spread between reef areas.

Recommendation 21-3 is of particular interest because it provides the opportunity for U.S. leadership in slowing unnecessary coral reef destruction in emerging countries, for developing new products and industries for the U.S., and for establishing fair and equitable trade rules for elements of an ecosystem without impacting the natural ecosystems.

The U.S. has been a world leader in developing techniques for coral cultivation that are simple, cheap and productive. In some areas many species of hard corals can be cultivated through fragmentation, which significantly reduces the number of live, wild corals needed for reproduction (and could result in no wild species required in a relatively short period of time). There has also been great success in developing cultivation techniques for sperm/egg reproduction which would require *no* harvesting of corals from natural reefs. This process, which has been successfully documented for more than a dozen species has several advantages, not the least of which is the fact that corals with identical genetic properties can be cultivated, which is of significance for laboratory work where comparisons of effects between two (or more) identical corals would produce more valid results.

These techniques are not only practical, the technology is immediately transferable to individuals or to communities to establish as businesses to replace their more destructive practices of wild coral harvest for the U.S. aquarium trade, the U.S. ornamental trade, or even for the international medicinal/pharmaceutical trade.

But simply providing the opportunity for cultivation over wild harvest will not be enough. It will also require new laws and treaties regarding the world trade in live and dead corals, live rock and other coral reef species. Through direction from the Coral Reef Task Force, the U.S. Agency for International Development (USAID) completed a study in March 2000, a report on the international trade in corals and coral reef species. That report details suggestions for improving

the international statutes to reduce destructive practices associated with coral reef trading. We suggest adding the following language to recommendation 21-3. **Based on the findings of the March 2000 USAID report on international trade in corals and coral reef species,** the National Oceanic and Atmospheric.....The U.S. Department of State should implement incentive programs **based on the findings of the report** to encourage....

Recommendation 21-4: Regarding the U.S. Coral Reef Task Force identifying critical research and data needs related to coral reef ecosystems.
As written, this recommendation is redundant with Recommendation 21-1. It makes sense to combine the two, as long as the emphasis on management and protection is expanded in 21-1.

Chapter 22 – Setting a Course for Sustaining Marine Aquaculture

Page. 271, paragraph 3 – The following sentence is not correct, "The nations first commercial open ocean aquaculture operation began in 2001, when ownership of a public project in Hawai'i waters was transferred to a private firm." It should be added that, "**The origin of the first U.S. commercial open ocean aquaculture project in Hawai'i began in 2001 with the lease of 28 acres of state marine waters to a private company, following a 1999 legislative amendment to state statutes to allow commercial offshore aquaculture leasing.**"

Page 273, From our experience, and we recommend adding "sea surface" for a more complete statement: "the ocean leasing system should include the **sea surface**, water column and ocean bottom."

Recommendations 22-1: Regarding designation of NOAA as the lead federal agency for marine aquaculture and creating an Office of Sustainable Marine Aquaculture.
If Congress is going to designate NOAA as lead federal agency for implementing a national policy for environmentally and economically sustainable marine aquaculture and create an Office of Sustainable Marine Aquaculture in NOAA, then we suggest the recommendation should be expanded to: 1) clarify the Department of Agriculture's aquaculture authorities and responsibilities, in consideration of the lead agency authorities and responsibilities being assigned to NOAA, and 2) the Executive Director (Manager) of the Office of Sustainable Marine Aquaculture should be appointed a member of the Joint Subcommittee on Aquaculture.

Recommendation 22-2: Regarding the development of a permitting, leasing, and regulatory program
Under bullet 5, the statement should include opportunity for "other federal agencies including the Department of Defense" to comment. U.S. Navy comments will be very important in siting a facility near any of their activities.

Best management practices and careful siting in an exposed open ocean site will take care of most environmental problems in terms of dilution. However, the issue of use of exotics and the potential for introduction as invasive species remains. Even if native species are used, the lesser problem of genetic drift is one to watch for and should be addressed in this report. Congress should also direct enhanced coordination amongst the federal and state programs to control

aquatic animal diseases and attempt to develop unified standards for commerce in marine and coastal aquaculture-raised products between states and through foreign trade. **We would like to see a new recommendation written to address these issues, or that they be added to the bullets under Recommendation 22-2.**

We suggest a new recommendation in which the NOC focuses on the needs to target native species for domestication and development as marine aquaculture species, and recognizes that funding needs to be allocated to the U.S. Department of Agriculture and/or the National Sea Grant Program to accomplish this task.

Chapter 23 – Connecting the Oceans and Human Health

The report discusses the new and potentially beneficial discoveries that have been and are likely to continue to be made by the biotechnology for compounds and products derived from ocean organisms. Hawai'i as a gateway to the pacific has both the expertise and facilities to be a leader in this field and is already recognized as such through the creation of several research institutions and their ties to the pharmaceutical industry.

Recommendation 23-1: Regarding NOAA, NSF and others to encourage multidisciplinary studies of marine species to discover bioproducts, develop compounds, and the like through competitive grants and support of federally funded centers.
There have already been several incidents in Hawai'i and the other Pacific Islands where research teams from more than one federally funded center descend on an Island all at once with no notice to the local resource management agencies, and with no coordination between groups. While studies of new bioproducts derived from the marine environment has numerous likely benefits, there needs to be coordination at the national level between the granting agencies and among the centers so as not to overwhelm or concentrate efforts in any one state. Likewise, similar coordination needs to occur between those collecting samples and the local resource management agencies

We especially support recommendation 23-3, requesting support for the development and implementation of efficient and cost-effective methods for identifying pathogens and toxins in coastal waters. At present, we are required by EPA to use enterococcus or *E. coli* bacteria as indicators of fecal pathogens in environmental waters. These bacterial groups have numerous non-human sources, and are not clear indicators of wastewater treatment and disposal system failures, absent an identified sewage spill. Other waterborne diseases of nonfecal origin, such a Leptospirosis in coastal watersheds, lack rapid monitoring methodologies. A nationally-supported search for better indicators of water quality from a public health point of view would be very useful to Hawai'i.

Chapter 24 – Managing Offshore Energy and Other Mineral Resources

Most of this chapter address oil and gas issues not relevant to Hawai'i. On pages 292 and 293, there is discussion of revenue sharing with coastal states that specifically excludes Hawai'i,

probably because of our lack of oil and gas resources. What is not clear is what revenue sharing laws would pertain to Hawai'i for other offshore energy or mineral resources. Later discussions of wind and wave energy, OTEC and marine minerals are not clear on this issue. There also is no mention of the growing use of deep cold water, from the ocean here in Hawai'i and from the Great Lakes to provide low-cost air conditioning.

Chapter 25 – Creating a National Strategy for Increasing Scientific Knowledge

We are encouraged to see that this section focuses on not just traditional biological, oceanographic and engineering sciences but broadens the definition to include the need for more data and information on the social sciences.

As has been re-iterated throughout our comments, we request that the federal agencies work in consultation with regional, State and local governments to develop and address priority research and that their needs to be a mechanism built into this system that ensures an emphasis on dissemination of results to the managers and end users.

A concern is raised here in regard to the balance of research efforts in "coastal" waters versus the deep "blue" ocean; Hawai'i, unlike most other coastal states, has a narrow coastal zone that is strongly affected by the surrounding deep ocean environment. Thus, Hawai'i has a large stake in ensuring that a balance is struck between nearshore research and management needs and research in larger basin-scale environment in which the Hawaiian Archipelago is embedded. The report touches on this, but it needs emphasis from the Hawai'i and/or island perspective.

This chapter calls for doubling of the investment in basic and applied ocean research over five years (Recommendation 25-1). The University of Hawai'i could reasonably be expected to be a major player in competing for enhanced funding by building upon its nationally respected ocean-related expertise, but only if its capacity for conducting the additional research is clearly visible to federal research managers and to peer reviewers of grant proposals.

Recommendation 25-2: Regarding the NOC developing a national ocean research strategy.
The national ocean research strategy should be derived from a bottom-up process where the priorities and strategies are developed by the regional science information boards. The NOC should coordinate the federal agencies' funding and technical assistance to support regionally set priorities and strategies. If the commission retains this recommendation as currently written, we recommend that the NOC be required *to consult and include in the national strategy* the science needs and priorities identified by local, state, regional, and national managers working through the regional ocean information programs.

Recommendation 25–5. Regarding the NOC coordinating federal resource assessment, mapping, and charting activities with the goal of creating standardized, easily accessible national maps that incorporate living and nonliving marine resource data along with bathymetry, topography, and other natural features.
Mapping and charting of near-shore areas is a fundamental need of coastal managers. A commitment to mapping and charting near-shore areas should be articulated in this

recommendation. When consolidating mapping and charting activities of the different federal agencies, the NOC should conduct outreach to user groups to determine which maps and charting tools are useful and should be maintained, and ensure that each state has the technical capacity to use these tools once developed.

Recommendation 25-4: Regarding Congress appropriating significant funding for an expanded national ocean exploration program. NOAA and NSF are designated as the lead agencies with involvement from USGS and the Navy's Office of Naval Research.
The report calls for NOAA to be the lead agency in many aspects of implementing the recommendations, and the NOAA Sea Grant College Program is highlighted in regards to research in a previous recommendation. We support the need for funding but again need to point out that there are numerous programs both within the UH system and elsewhere that should be consulted and considered in the allocation on management of these grant funds. Examples of institutions that receive NOAA funding include: the Sea Grant Program of the UH, the Joint Institute for Marine and Atmospheric Research (JIMAR), and the Hawai'i Undersea Research Laboratory (HURL, which all provide well-defined interfaces for UH researchers to tap into NOAA extramural funding. HURL is uniquely situated to benefit from investments in ocean exploration called for in the report.

UH Manoa already has substantial funding for ocean research from the NSF and the National Aeronautics and Space Administration (NASA), in addition to NOAA funding. The Hawai'i Ocean Time-series (HOT), now in its 16th year and funded by NSF and the State of Hawai'i. HOT is seen as a prototype of a new national network of ocean observatories under a major National Science Foundation initiative. The UH faculty have recently proposed three major Hawai'i-based ocean-related research centers. One was recently funded jointly by NSF and the National Institute of Environmental Health (Center for Ocean and Human Health); and two are pending. NASA and NOAA provide substantial funding to the International Pacific Research Center, in partnership with Japan, supporting Asia-Pacific ocean, atmospheric and climate research. Some of this funding is being used to develop a Hawai'i region ocean model to ultimately support such applications as search and rescue and pollution dispersal.

The ecosystem-based research and management philosophy espoused in the report meshes very well with efforts such as HURL in support of coral reef ecosystems in Hawai'i and other U.S. pacific waters. Numerous UH scientists are working with NOAA to conduct research needed to manage the NWHI Coral Reef Ecosystem Reserve. The Hawai'i Coral Reef Initiative Research Program, jointly managed by the UH and the Department of Land and Natural Resources, supports monitoring and research activities aimed at building capacity to manage Hawaii's coral reef ecosystems. Watershed research is an important contribution to the integrated research and management philosophy recommended throughout the report.

Chapter 26 – Achieving a Sustained, Integrated Ocean Observing System

This chapter calls for a substantial national investment in building and sustaining an operational ocean observing system to provide the data needed to produce information for ocean policymakers, managers, and for other stakeholders. Faculty of the UH have played a strong

leadership role over the past decades in developing several prototype components of such an integrated operational observing system, such as the pacific tide gauge network and the equatorial pacific TAO array of buoys. Another example is the shoreline monitoring and vulnerability analyses. The State of Hawai'i, through the UH, is willing to play the leading role in the development of the Hawai'i-Pacific ocean observing system. The web site at http://kela.soest.Hawai`i.edu/HI-POIS/ provides an inventory of the various Hawai'i-Pacific coastal ocean observing efforts and plans.

Recommendation 26–2. Regarding Ocean US, with NOC oversight, being responsible for planning the national IOOS with NOAA as the lead federal agency.
The commission should clarify the mechanisms which will be utilized to ensure coordination between Ocean.US, NOAA, and the regional science boards in managing the IOOS. In planning for the national IOOS, Ocean.US should facilitate substantive and significant representation of the user community and place an emphasis on transferring the IOOS information to coastal decision-makers in a useable and accessible form. Further, Ocean.US and NOAA should seek to build state and local user capacity by supporting necessary tools such as training courses, technology transfer, as well as software and hardware.

Chapter 27 – Enhancing Ocean Infrastructure and Technology Development

In the section on "Maximizing Resources through Collaboration", the UH has several examples of regional collaboration and Hawai'i stands poise on several fronts to be a center for collaboration. While we do not attempt to name all these programs, and recognize the examples given in this section are not exhaustive, it is important that a statement be made about the need to inventory existing collaborative efforts to ensue that all sites that have the infrastructure and technical expertise are considered equally in the allocation of funds and project focus.

The section on "Undersea Vehicles" in this chapter, the HURL and its assets was completely left out of the discussion. We have edited the paragraphs in bold to insert appropriate text to reflect these assets and their operating ranges.

"For missions of long duration, the United States relies on the Navy's NR-1 nuclear research submarine, which can stay submerged for thirty days but has a maximum depth of only 3,000 feet. The NR-1 was constructed in 1969, and its service life will end in 2012" **Other federally funded intermediate-depth diving occupied submersibles include the Pisces IV and V capable of diving to 6,500 and 6280 feet, respectively.**

All submersibles in the federal fleet, including *Alvin* and *Jason II*, are currently housed at the National Deep Submergence Facility at the Woods Hole Oceanographic Institution. The facility is funded through a partnership among NSF, Office of Naval Research, and NOAA. This is not an accurate statement and as there are other assets at five other facilities including Hawai'i: **The National Undersea Research Program within NOAA consists of six national centers, one of which, the NOAA Undersea Research Center for Hawai'i and the Western Pacific established in 1980 at the UH Manoa (more commonly referred to as HURL) operates the HOV's Pisces IV and Pisces V, the ROV RCV-150 with a maximum depth of 3000 feet, and**

R/V Ka'imikai-o-Kanaloa, a 220-foot dedicated support vessel with laboratory facilities and a multibeam bathymetric seafloor mapping sonar system to service the Hawai'i and Western Pacific Region.

The report supports a mix of vehicles to support current and future research needs. Recommendations include: (1) setting aside funds at the National Deep Submergence Facility to gain access to vehicles outside the federal fleet for specific missions; (2) acquiring a second ROV to join *Jason II* by 2005, at a cost of approximately $5 million, **and strongly consider basing this new ROV system at a second location that would minimize the transit time for periodic overhaul and refit of both ROV systems** [Please note that this was added verbatim from the NRC report cited in this section]; and (3) initiating an engineering study to evaluate various options for replacing *Alvin*, with a goal of providing submergence capability up to 21,000 feet, at a cost of approximately $20 million. The report noted that in time and with a higher level of funding, additional platforms with greater capabilities could be profitably added to the fleet.

Please add the following paragraph to this section: **The diving assets of NOAA's Undersea Research Center for Hawai'i and the Western Pacific (HURL) should be made available to the scientific community that requires intermediate-depth submergence based operations in the Pacific region. The average maximum depth for all *Alvin* dives is presently 2079 meters, which is just slightly beyond the range of HURL's *Pisces* submersibles. In addition, of nearly 500 *Alvin* dives carried out from 2000 to mid-2004, 70% took place in the Pacific with the remainder in the Gulf of Mexico and Atlantic where *Alvin* is based. Therefore, HURL should be considered as the host and operator for the new ROV from its strategic location in the middle of the Pacific Ocean in order to more efficiently satisfy the overwhelming trend for scientific missions in the Pacific region.**

Recommendation 27–4. Regarding Congress establishing a modernization fund for critical ocean infrastructure and technology needs. Spending priorities should be based on the NOC's ocean and coastal infrastructure and technology strategy.
We support this recommendation and recommend and the following to the third bullet:
• The acquisition of vessels and infrastructure needed for an expanded national ocean exploration program **that are geographically distributed to match the current and projected scientific needs**

Chapter 28 – Modernizing Ocean Data and Information Systems

Recommendation 28–1: Regarding Congress amending the National Oceanographic Partnership Act to establish and fund Ocean.IT as the lead federal interagency planning organization for ocean and coastal data and information management.
We support this recommendation and note the importance that this is an interagency process. We recommend that Ocean.IT be required to establish an advisory board or other process for soliciting the input and involvement of state and local governments, marine labs, and university researchers.

Recommendation 28–2: Regarding NOAA and the U.S. Navy establishing a joint ocean and coastal information management and communications program to generate information products relevant to national, regional, state, and local needs.
Hawai'i supports a joint information and communications program by NOAA and the U.S. Navy and other pertinent federal agencies. We recommend that the commission recognize the importance of state and locally derived data and add a requirement to this recommendation calling on NOAA and the U.S. Navy to develop an advisory board or other consultative process for soliciting state, local, and other end user input. NOAA and the U.S. Navy and other pertinent federal agencies should also fund research on the state and local scale.

Recommendation 28–6: Regarding the President convening an interagency task force to plan for modernizing the national environmental data archiving, assimilation, modeling, and distribution system with the goal of designing an integrated earth environmental data and information system.
Hawai'i supports a joint information and communications program by NOAA and the U.S. Navy and other pertinent federal agencies. We recommend that the commission recognize the importance of state and locally derived data and add a requirement to this recommendation calling on NOAA and the U.S. Navy to develop an advisory board or other consultative process for soliciting state, local, and other end user input. NOAA and the U.S. Navy and other pertinent federal agencies should also fund research on the state and local scale.

Chapter 30 – Funding Needs and Possible Sources

Our concern with this chapter is that it fails to propose any mechanism to rank or select priorities among the myriad of recommendations proposed in this Report. There is a critical need to prioritize and assess these recommendations to determine which are able to be instituted within a relatively short time frame, which are crucial to the health and welfare of the citizens and our coastal and ocean resources, and which are essential to overall program implementation and coordination. Regardless of the mechanism proposed to initiate this prioritization process, the states need to have full and equal participation in this selection process and all ensuing discussions about implementation.

There are two critical points in this chapter:

1) The commission recognizes that the states must have a prominent role in developing a comprehensive national ocean policy; and
2) That the additional roles and responsibilities should not take the form of unfunded mandates.

While we support the reallocation of the Outer Continental Shelf revenues, this third point presents some concerns. The commission proposes to create the Ocean Policy Trust Fund to pay for the recommendations in this report. The funding would come from the approximately $4 billion generated annually by the Outer Continental Shelf oil and gas revenues that are not already dedicated to existing programs. There is no discussion of how these "excess" funds are

currently distributed or how difficult it might be to get them reallocated to the Ocean Policy Trust Fund. It must be assumed that some group or groups of constituents are currently utilizing the funds through other federal programs.

In the chapters we reviewed, there was no mention about the need to organize the various ocean constituencies into a cohesive voice that could lobby for this allocation of funds. Finally, there was no discussion of alternative sources of funding.