

U.S. COMMISSION ON OCEAN POLICY



MINUTES

Seventh Meeting of the U.S. Commission on Ocean Policy
Renaissance Ilikai Waikiki Hotel, Honolulu, HI
May 13-14, 2002

Commissioners in Attendance

Honorable James D. Watkins, (Admiral, USN (Ret.)) – Chair
Dr. Robert D. Ballard
Mrs. Lillian Borrone
Ms. Ann D’Amato
Vice Admiral Paul G. Gaffney II, USN
Professor Marc Hershman
Mr. Paul L. Kelly
Dr. Frank Muller-Karger
Mr. Edward B. Rasmuson
Honorable William D. Ruckelshaus
Dr. Paul A. Sandifer

Meeting Attendees

A list of meeting attendees, including affiliation where provided, is included in Appendix I.

MONDAY, MAY 13, 2002

Welcome

Admiral Watkins called the meeting to order at 1:00 p.m. and introduced Ms. Snowbird Bento, who opened the meeting with a chant and blessed the Commissioners with leis. Admiral Watkins noted that the Oceans Act of 2000 did not call for a Hawaii and Pacific Islands regional meeting, but that a meeting was added to the Commission’s schedule because of the importance of the area to U.S. ocean policy. Admiral Watkins then introduced Mr. Nainoa Thompson, Trustee of Kamehameha Schools, The Honorable Gilbert Coloma-Agaran, Chairperson, Board of Land and Natural Resources, and The Honorable Pedro A. Tenorio, Resident Representative, Commonwealth of the Northern Mariana Islands, who provided welcoming remarks.

Mr. Thompson offered a local Hawaiian perspective on the oceans. Mr. Thompson commented that, in Hawaii, despite the fact that the problems and solutions to environmental problems are known, there is no management structure in place to make sustainable choices. He suggested several assets that make Hawaii the perfect laboratory for learning how to live well on islands. These assets include: culture, community consciousness, education that focuses on conservation and stewardship, and the existence of

the second largest MPA in the world (the NW Hawaiian Islands Reserve) that can be used as a benchmark for maintaining healthy coral reef ecosystems. Mr. Thomson commented on his current position, which is to hold in trust the well-being of students and define educational goals. He emphasized to the Commission the importance of institutionalizing its goals (i.e., stewardship) in education.

Chairperson Coloma-Agaran extended a welcome to the Commission on behalf of Hawaii Governor Ben Cayetano. He remarked that the work of the Commission is very important to Hawaii. He commented on the pervasiveness of the ocean in the daily life and cultural heritage of Hawaiians. He remarked on the importance of ocean resources to the state's economy, while addressing the need to mitigate the impacts of marine debris, invasive species, and the closure of offshore areas to fishing. In addition, he described management challenges associated with the state's vital cruise ship, maritime, and tourism industries. The Chairperson's recommendations to the Commission were two-fold: first, he encouraged partnerships to produce informed decision-making; second, he called for more outreach to user groups.

Representative Tenorio began his remarks by commenting on the lack of attention given island territories in the national political arena. He also shared ocean and coastal management problems facing these territories. He commented on the islands' susceptibility to marine pollution and noted the lack of funding to local governments needed to implement federal programs that would address this problem. He also emphasized the need for education in order to help protect the marine environment. Representative Tenorio concluded his remarks by letting the Commission know he would be submitting additional recommendations on behalf of the CNMI Coastal Resources Management Office.

Following their opening remarks, the panelists commented on a number of issues raised by the Commission. The panelists were asked to address the lack of capacity in government needed to incorporate knowledge and cultural values. Mr. Thompson responded that it is important to create a collective vision to define the uniqueness of Hawaii in a simple and clear way. He suggested that this vision should bring together science and culture and should be institutionalized in the system of education. He emphasized his belief that the well-being of children should be the basis of a core set of values for planning for the future.

The Commission noted the comment made by Chairperson Coloma-Agaran that Hawaii is "land poor and ocean rich." It was also noted by the Commission that Hawaii has been one of the first states to offer pilot-scale offshore leasing for aquaculture. The question was raised as to the importance of offshore aquaculture to the future and what the potential is for leasing areas within the EEZ for other purposes (i.e., recreation). Chairperson Coloma-Agaran noted that this issue is very controversial and that it took 4 to 5 years of work to comply with environmental regulations for the first issued lease, even though the leased area was very small. He did, however, express hope for continued growth and expansion of ocean leases. He stated that one of the conflicts that arose with the first lease is that it excluded other users from the ocean area. He acknowledged that today, the ocean is viewed more for recreational purposes and he emphasized the importance of dealing with user conflicts on both a regional and national scale.

The Commission then asked for Chairperson Coloma-Agaran's recommendation on how to stem the spread of invasive species of algae and corals by the shipping industry without harming that industry. Chairperson Coloma-Agaran responded that policies governing ballast water, for example, should be institutionalized. The lack of state access to federal facilities (i.e., marine bases) for inspection purposes was also noted.

The Commission noted the comment made by Chairperson Coloma-Agaran that addressed the impact of tourism on MPAs. Chairperson Coloma-Agaran was asked if the State of Hawaii or the Board of Land and Natural Resources had any formal recommendations on how to manage different uses within an

MPA. Chairperson Coloma-Agaran responded that he believes there are such recommendations and that he would provide these to the Commission at a later date.

The question of how to manage the impact of tourism on ocean resources (like the destruction of coral reefs caused by dive boat anchors) was raised by the Commission. Chairperson Coloma-Agaran responded that, because of a lack of resources, the state has had to rely on industry to self-police itself. In response to a Commission question on Hawaii's mooring program, Chairperson Coloma-Agaran stated that he hoped to expand this program faster than what has been done so far. He emphasized the need for funding in order to identify areas that need to be protected and establish management programs. At the Commission's request, he offered to submit more specific recommendations.

The vastness of the EEZ and the need for exploration was noted by the Commission. It was also noted that the general public is not aware of the scope of this area, and that the role of a commission is to bring this to the public's attention. Mr. Thompson responded to Commission's comments by stating that a good map is needed of the area.

The Commission remarked that the development of nonliving marine resources, specifically deep sea mining, has not been of interest to the U.S. in several years. It was noted that the ocean areas surrounding Hawaii have been mentioned as a potential location for this type of activity. The question was asked whether any hard mineral activity was occurring at the present time by domestic or international operators. Chairperson Coloma-Agaran indicated that he did not know of any such activity.

The Chair thanked the panel and asked that a letter prepared by Governor Carl T.C. Guterrez of Guam be submitted for the record.

Comments of Vice Admiral Conrad Lautenbacher, U.S. Navy (Ret.), Under Secretary for Oceans and Atmosphere, U.S. Department of Commerce

Admiral Watkins introduced VADM Conrad Lautenbacher, U.S. Navy (Ret.), Under Secretary for Oceans and Atmosphere, U.S. Department of Commerce, and noted that NOAA was established by the Stratton Commission in the late 1960s. Admiral Watkins remarked that he wanted to avoid another 35 year gap without focusing on how to be better ocean stewards.

VADM Lautenbacher thanked the Commission for their service and remarked on the importance of the Commission's work to the future of the country. VADM Lautenbacher indicated that his talk would focus on oceans and climate, specifically on the value of ocean observing systems, as requested by the Commission. He began by noting the importance of oceans and climate to national economic security and quality of life. The need for ocean observing stations, he stated, stems from the fact that the ocean is under-explored and under-observed. He remarked that a complete understanding of ocean-atmosphere interactions requires integrated and sustained research and commented that this kind of effort enables long-term predictions and projections to be made. He then described current successes with ocean observing, while recognizing the impetus to couple current efforts with advancing technology in order to create a comprehensive global system. He concluded his remarks by summarizing the national and international efforts to develop an ocean observing system at this scale.

Admiral Watkins stated that he was impressed with the draft of the report from the recent Ocean.US Integrated and Sustainable Ocean Observing System (ISOOS) Workshop. He also remarked on the value of having the draft report posted on the web for comments across the scientific community. Admiral Watkins noted that the biological component of this kind of effort has been traditionally overlooked. He then asked VADM Lautenbacher to comment on how marine biology will be addressed in the research component of the current effort. VADM Lautenbacher responded that ocean observation is greater than

the observation of physical parameters and will include biochemistry and biology. He also emphasized the connection between physical and biological factors, noting that there is agreement that if you are going to understand biology, you have to understand the physical parameters; furthermore, if you know where heat and nutrients are, you know where life of all forms will prosper. He remarked that, as NOAA expands its services related to the ocean observation effort, he sees marine fisheries as an important component. He also noted that sensors need to be built that will bring in the right kinds of data for this connection.

One of the Commissioners noted their involvement in a Pacific Northwest climate change study, wherein agencies were asked to what degree they considered the effects of global climate change in day-to-day considerations. It was noted that agency participation in this kind of assessment is typically limited. VADM Lautenbacher was asked if this inaction was caused by a lack of proof of a change in variability, or if it is because this type of information is not getting to the agencies. VADM Lautenbacher was also asked for suggestions on how information on climate change can be made more apparent to agencies for use in day-to-day decision making. VADM replied that currently there is not enough effort being put into regional assessments. He noted that funding for regional assessments should be increased so as to help bridge the gap between scientists and end users. He also recognized the importance of asking managing agencies what kind of data would be useful to their work. He cited the work of the NOAA Forecast Systems Laboratory, located in Boulder, Colorado, for their work in addressing social science in their research.

The Commission noted that the work of the Stratton Commission led to the creation of NOAA. It was then asked what, if anything, did the Stratton Commission not do that may be inhibiting NOAA from completing its mission. VADM Lautenbacher was also asked to address the work of NOAA in global waters, specifically in the area of ocean exploration. It was noted by the Commission that NOAA has not been inclined to work at the international level. VADM Lautenbacher responded that the structure of NOAA needs improvement. He informed the Commission that he has instituted a “bottom-up” review of NOAA’s business practices that addresses three main questions, which are (1) are we structurally aligned to complete our mission?; (2) are our resources and requirements properly aligned?; and (3) are we being as efficient as possible? He also addressed the need for more integration and coordination at NOAA headquarters. He noted that a report will be due soon that addresses the need to promote certain themes—like international operations—from the line offices to the headquarters-level.

VADM Lautenbacher was asked to address the interaction between NOAA operations and basic research. He was also asked for suggestions on how the greater research community can assist NOAA operations. He responded that there is not a good enough connection to basic research outside of NOAA. He commented that NOAA is mainly focused on applied research—that is—translating larger themes into an operational mode. He stated that an issue is how to harness what is being done at NSF, ONR (and other places), which he hopes will be accomplished through interagency partnerships. He noted that his role is to see what work is being done and figure out how it ties into NOAA.

The Commission requested that VADM Lautenbacher provide a detailed report to the Commission on the inclusion of a biological component in the ocean observation system effort.

VADM Lautenbacher was asked to comment on the applicability of an ocean observing system for enforcement purposes. VADM Lautenbacher agreed to provide further information to the Commission on this subject while noting that, if an ocean observing system is put in place, it could be used for multiple purposes. He suggested one idea may be to put people in policy coordinating committees at places such as the Office of Homeland Security to address these purposes. The Commission noted that another purpose for such a system may be to monitor protected areas where human resources are at a minimum.

Admiral Watkins commented that marine science education is often overlooked in program development as a consequence of federal agencies being mission-oriented. He expressed his hope that, in the development of a global ocean observing system, education would be built in at the outset.

The Commission asked whether the Integrated Sustained Ocean Observing System (ISOOS) effort should be run by a single agency or by a federation like NOPP/Ocean.US. The Commission also remarked on the ability of states to sustain programs of this kind and asked VADM Lautenbacher if states should be therefore included in this effort. VADM Lautenbacher responded that this was a difficult question and that work on ISOOS may not be far enough down the road to provide an answer. He noted that NOAA has the central, facilitator role to play and that an integrative process will not be difficult for NOAA to bring together. He expressed the intent for a mechanism to be put in place that will allow a cohesive budget to be built across agencies. He also commented that there has to be agreement on an operational structure whereby the participating agencies would maintain some autonomy, but also be joined in a network. Regarding the incorporation of other organizations, VADM Lautenbacher told the Commission that this issue was currently under scrutiny.

The point was made by the Commission that the CZMA has succeeded beyond the expectation of Congress to provide funding to the states. It was also noted that the states have instituted different plans, with some states wanting to extend their jurisdiction into federal waters. As a result, conflicts have arisen between state agencies, federal agencies, and stakeholder groups. The Commission asked VADM Lautenbacher if he has considered these conflicts in the context of state versus federal rights. Also, VADM Lautenbacher was asked to give his thoughts on how to improve this relationship in terms of the structure of the CZMA. VADM Lautenbacher responded that he respects the progress that has been made because of CZMA. He remarked that this federal/state relationship works in most cases, with a few notable exceptions. He noted two problems with that need to be fixed. First, he stated that the consistency review process should have time limits so that projects cannot be tabled indefinitely. Second, he stated that information disclosure requirements should be laid out more specifically at the outset of the consistency review process. He concluded by stating that he believes that the CZMA, with modifications, will continue to serve the country well.

It was noted by the Commission that VADM Lautenbacher's written testimony stated that the ocean observing system would assist in providing better stock assessments for fisheries management. The Commission commented that they have heard a lot about the tragedy that results from overfishing. It was noted that, in the previous panel, Mr. Nainoa Thompson attributed the fisheries depletion to a failure of political will caused by a lack of values and a lack of a management system. The question was asked as to how to improve the current system of management so as not to lead to a failure of political will. VADM Lautenbacher responded that the current system does not maintain a broad view of the problem. He noted that, for a long time, the system was designed to increase technology—leading to the problems that we have today. He stated that the course has changed over the last ten years to a management regime in which stocks are managed for the future. Still, he noted, there is a need to compare current and future economic values and strike balances. Also, he stated that there is no system in place in which the government is allowed to address the interests of all involved groups. He suggested that the approach should be to look across the board at all economic impacts and come up with a solution that is fair to everyone involved.

Management of International Living Marine Resources

Ambassador Mary Beth West – Deputy Assistant Secretary for Oceans and Fisheries, U.S. Department of State – Major developments in international fisheries

Ms. Kitty Simonds – Executive Director, Western Pacific Regional Fishery Management Council – Managing international fisheries in the Pacific

Mr. Tom Webster – Captain, F/V Havana

Dr. Scott Eckert – Senior Research Biologist, Hubbs-Sea World Research Institute – Safeguarding Pacific sea turtles in the oceanic commons

Professor Jon Van Dyke – Professor of Law, William D. Richardson School of Law, University of Hawaii – Promoting orderly management of the world’s living marine resources

Following the panelists’ presentations, Admiral Watkins clarified the position of the Commission regarding the United Nations Law of the Sea (LOS) Treaty. He noted that letters had been sent on behalf of the Commission to the President, the Secretary of Defense, the State Department, and the foreign relations committees of the House and Senate urging the ratification of the treaty. He expressed his hope that by this time next year, the treaty would be ratified. He stated that the U.S. can no longer stand outside the system and that the Commission was quick to come out with its support.

Admiral Watkins statement was supported by the rest of the Commissioners, who restated the importance of U.S. involvement in international forums that address living marine resources and threatened species. The question was asked as to how the existing international forums, like the International Whaling Commission (IWC), should be modified in order for progress to be made both with the status of living marine resources and the well-being of the involved human groups. Ambassador West remarked that some of the management organizations, especially the IWC and the Inter-American Tropical Tuna Commission (IATTC), are older organizations that may need to revise their original goals. She suggested several options. First, she stated that consideration should be given, where appropriate, to renegotiating older conventions, which is what is happening now with the IATTC. She then expressed the need to continue to try to push new concerns, like by-catch issues, in existing organizations. She noted the struggle that IATTC is going through now trying to decide on an allocation scheme. She remarked that a lot of effort needs to be put into keeping organizations responsive to new issues.

Ms. Simonds responded by placing the Commission’s question in the context of the efforts of the Hawaiian longline management regime. She noted that the regime was created by the Western Pacific Regional Fishery Management Council together with the fishermen and that it is the best longline regime in the U.S., if not the world. She stated that all of the fishermen have to carry Vessel Monitoring Systems (VMS) and report where they fish and the amount of by-catch they land. She stated that, as a result of these requirements, the regime has produced a great database of these kinds of information. She stated that they had hoped to take the regime to the rest of the world, but that circumstances prevented this from occurring. She noted the lawsuit that was brought against NMFS concerning the “jeopardy” status of sea turtles. She expressed her dissatisfaction with the current definition of “jeopardy”—saying that it is too restrictive for fishermen. She stated that NMFS was currently working on its second biological opinion and that the council has asked for itself and the fishermen to be involved in the process. NMFS she said, has had a policy in place since 1992 that requires they do not consult with anyone outside of the agency. She stated that, prior to 1992, there had been more interactions. She noted that the council has asked NMFS to change its policy. She asked, if the fishery is closed, how the council could transport the longline regime to the international community.

Mr. Webster was asked if foreign fleets target sea turtles or if the turtles are by-catch. Mr. Webster responded that the foreign fleets are not targeting the sea turtles. He remarked that the turtles are considered a nuisance to fishermen because dealing with a turtle on a fishing line takes time away from other business. In response to a question regarding the consumption of turtles in certain places, he stated that, although there are places where turtles are an important part of the diet, he can’t imagine any high seas fleets actively targeting turtles. He also indicated that he had never hooked a turtle while fishing.

The Commission asked Ambassador West to comment on the need to build capacity in third world countries to manage fisheries. Ambassador West noted that there are current efforts underway to develop

management structures and enforcement capabilities in these countries. She noted a recent workshop on fisheries enforcement held in South Africa. Some of this help, she stated, is in the form of financial assistance (i.e., USAID), while other help involves technical assistance. She stated that NOAA, DOI, USAID, EPA, and USCG all help with building capacity. She also stated a need for a concentrated effort to work on sustainable development. Along with the State Department, each of these agencies, she said, is at work on plans to meet these goals.

Dr. Eckert was asked by the Commission to offer policy recommendations for the management of sea turtles. Dr. Eckert responded that there is a need for a unified approach to treaty and convention obligations. He stated that although there is a large number of treaties and regional approaches, turtle species move between regional zones and need to be managed accordingly. The LOS Treaty is a good step, he stated, but a unified direction is needed for regional treaties. He noted that these treaties also need to be binding.

The Commission noted the efforts made by the U.S. to avoid unilateral action in international treaties. Ambassador West and Professor Van Dyke were asked if there is pressure in Congress for unilateral action, and if there are any circumstances where unilateral action is necessary. Ambassador West stated that the best of kind of response is a multi-lateral or regional response. She remarked, however, that in some cases trade has been used effectively by regional fisheries management organizations, as a lever in international fisheries management. She noted the example of ICCAT, which gives notice to countries with foreign fisheries in the ICCAT area operating outside ICCAT rules, requiring them to follow ICCAT requirements or face bans on imports from member countries, including the U.S. As a result, she stated, several countries have improved their control over vessels flying their flags, and have joined ICCAT. She commented that whether or not unilateral action is necessary or appropriate depends on several factors. For example, it would not make sense even to consider unilateral action, she stated, unless a country were the major market for the species at issue. She argued that it is still best to take a multi-lateral approach; that is certainly true in the case of the longline regime where the U.S. is not the major market.

Professor Van Dyke echoed Ambassador West's comments and noted that international law operates under a primitive legal system. He remarked that the international community is working slowly to build institutions, such as a legislative bodies and courts. He noted that unilateral measures are still important and that claims and coercion have been effective in showing the international community that the U.S. is serious about protecting species. He commented that these mechanisms are not, however, desirable ways to deal with the issues. He noted that the U.S. must engage the international community in the long run and that a spirit of internationalism must be reemphasized. In the past couple of years, he stated, the U.S. has been viewed as arrogant and there has been tension between the U.S. and the rest of the world. He stated the need to work closely with other countries to build solutions with which everyone is comfortable.

The Commission asked if there was any current pressure in Congress for unilateral action. Ambassador West responded that she did not know of any such pressure.

The Commissioners asked Dr. Eckert about the situation presented in testimony under which the Endangered Species Act was invoked to protect sea turtles. It was noted that the U.S. fishing fleet in Hawaii has been hurt by this, particularly because invoking the ESA does not curb the efforts of foreign fleets. Dr. Eckert responded that this is a situation where things did go wrong. It was noted by the Commission that the groups that seek to utilize these laws are not bothered by other factors and that this is how these laws go wrong. Dr. Eckert responded that, in general, the ESA is a very good law. In the case at hand, the law characterized the fishermen's actions as "jeopardizing" the rate of recovery of the species. By eliminating the take of these species, the fishermen became in compliance with the law. The bottom line was that the Hawaiian fleet was taking too many turtles, although their take was small

compared to the overall status of the turtle populations. He recommended that the ESA not be changed, but that the approach to managing stocks be changed so that species are considered on a population-wide basis. The Commission remarked that, until there is a multi-national, sustainable approach, the U.S. fishing fleet will continue to be penalized, even though many of the U.S. fishermen are stewards.

Dr. Eckert was asked to address the need to achieve a credible census of turtle populations. It was noted that NOAA did not take initial action to address the population decline because a threat was not perceived for several years after the decline had begun. Dr. Eckert noted that, in the case of the loggerheads, the problem was in the way in which the population size is monitored. He stated that all parties were caught off guard by how fast the population went down, and as a result, everyone involved was slow on the uptake to do anything about it. When the decline became obvious in the mid-1990s, he said that there was little response at the agency level. He remarked that, with the advent of DNA analysis for stock identification came the realization that the turtles that were being taken by the Hawaiian fleet were not from the Eastern Pacific where the population crash had happened—they were from the Western Pacific. He noted that there is a lack of data on the turtle populations in the Indonesian area. He also noted that, once a problem is recognized, mitigation needs to happen right away. The Commission responded that it is not possible for the U.S. to solve these problems by itself.

It was noted that the Act that created the Commission called for increasing the coordination of national policies. The preservation of the U.S. as a leader in international organizations was also mandated by the Act. Ambassador West was asked how important it was for the U.S. to practice at home what we are trying to recommend abroad. Ambassador West responded that the U.S. is the “greenest” of the international communities, meaning that the U.S. is pushing conservation as the number one priority to achieving sustainability. If not for this pushing, she stated, we wouldn’t be where we are today. She stated that leadership is critical and that it is important to practice what we preach. She commented that the U.S. should strive to manage well domestically, especially since it will be necessary for us to pass our technology and tools on to others in the international community.

The Commission asked Ambassador West if there is sufficient political will in the U.S. to enter into international treaties. Ambassador West responded that the answer depends on the particular factual situation and bilateral relationships at hand. Professor Van Dyke acknowledged that the will of the U.S. sometimes fluctuates in the international arena, and that as a consequence, the U.S. is sometimes seen as inconsistent. He stated that the U.S. needs to see ourselves as part of the world and has to be willing to compromise, but also to bring pressure if need be.

The panelists were asked to comment on the new technologies that have become available for fisheries monitoring, enforcement, and operations. Mr. Webster responded that there is technology out there, such as VMS, which has been effective in monitoring closed areas. He remarked that if the fishermen are going to stay in business, they need to be active participants in technology. Dr. Eckert responded that, in his research, technology is the key to learning about animals and habitat. He cited his use of satellite telemetry to track turtles as they move across ocean expanses. He stated that technological advances will provide huge advances to fisheries management, including the use of VMS and electronic observing systems. Specifically, he suggested that technology can help longliners reduce the amount of by-catch. He stressed the importance of including fishermen in the process of implementing technological advances. Dr. Eckert concluded by recommending that biological fixes be considered as well as technological fixes for reducing by-catch. For example, he noted that fishing conducted in waters at depths below known turtle habitats can both allow fishing and prevent the by-catch of turtles at the same time. The question was asked by the Commission as to the difficulty in getting access to satellite technology. Dr. Eckert responded that the cost of technology is often prohibitive. He stated that it cost him \$6500 to track one animal for 6 months. He stressed that there is a much data that can be retrieved by technology, but that it is very expensive.

Commission Business

Admiral Watkins reported on the progress of the Commission Working Groups in developing topical issue papers. He stated that the issues, which are included in the worksheets in the form of questions, were being reviewed by the Commissioners and staff. He also commented on the work plans that are being developed by each Working Group. He noted that an important element of the work plans involves making sure that the Commission's work is in line with what is required in the Oceans Act. Some of this work, he commented, will be completed by contractors. He then asked a member of each of the Working Groups, which met earlier that morning, to comment on where they are in terms of the issue worksheets. He concluded by noting the expectation that the issue questions will be posted on the web in the next couple of months to solicit comments and recommendations from the broader ocean community.

Commissioner Ballard reported on the status of the REMO Working Group. He presented a series of suggested changes to the issue worksheets recommended by the Working Group members. He asked that all of the modifications be incorporated into the issue worksheets.

Commissioner Ballard also reported on series of action items to be undertaken by the REMO Working Group, which include the following:

Ask OCSAP member Sharon Walker to prepare a white paper that outlines policy recommendations on K-12 ocean education.

Ask Dr. John Richards, new president of the JASON Foundation for Education, to comment on the complexity of reaching K-12 educators.

Begin engaging the OCSAP.

Continue the assessment of marine facilities as required by the Oceans Act. Expect involvement of outside consultant.

Note that, because the Group's charter has expanded to include ports and transportation, it is requested that the Group receive the necessary technical assistance to address these issues. Also noted that the issue of traditional marine operations as they relate to the oceanographic community is now covered under the Technology section of Worksheet #5.

Commissioner Sandifer spoke on behalf of the Stewardship Working Group. He reported on the Group's approval of the process document and issue worksheets. He also stated that the Stewardship Group did not go through the worksheets on a question-by-question basis at their morning meeting. He indicated that members of the Stewardship Group would submit their edits to staff via email.

Commissioner Sandifer presented a series of suggestions on behalf of the Stewardship Group to other Commissioners and members of staff. The suggestions are listed here:

Need better definitions of ecosystem management, essential fish habitat (EFH), and the precautionary principle in order to address issues related to living marine resources. Suggest contracting out an assignment to review the precautionary principle and assess its importance to living and nonliving marine resource management.

Asked for Best Management Plans to be identified that relate to the marine operations of maritime industries.

Suggested that the Stewardship Working Group address education issues. Stewardship is an informed behavior—one that results from appropriately targeted information on the sustainable use of marine resources.

Suggested that the Stewardship Working Group address nonliving marine resources and provide recommendations to Governance Working Group.

Stressed the importance of the greater scientific and academic community and the recognition of academic capital.

Stressed the need for an MPA encyclopedia. Indicated that Admiral Watkins had sent a letter to Admiral Lautenbacher requesting such a product from NOAA.

Stressed the need for an operational, non-biased definition of the precautionary principle.

Suggested contacting USDA for information regarding the contribution of agriculture to NPS pollution.

Requested the identification of laws that connect land use activities to the coastal environment.

Indicated that the Stewardship Working Group would like to begin to utilize the OCSAP. Indicated two points of contact: (1) at Seattle meeting, (2) distribute document of questions to be addressed by OCSAP at future regional meeting.

Commissioner Ruckelshaus spoke on behalf of the Governance Working Group. He commented on the Group's approval of the process document and issue worksheets. He also echoed the desire expressed by the other Working Groups to begin to engage the OCSAP. He stated that Commissioner Borrone would assist the other Groups with issues related to her area of expertise, but would remain a member of the Governance Working Group. He explained that the Governance Working Group had gone over the issue worksheets at the morning meeting and had made edits as they saw fit. In particular, he stated that the Group recommended that problem statements be explicitly stated within the issue questions and noted that these statements could be combined with the presentation of case studies. He indicated that the two topic headings under the purview of the Governance Working Group had been expanded to include issues of waste disposal, the restoration of critical areas along the coast, and biotechnology, among others.

Commissioner Ruckelshaus continued by stating that the staff had been asked to identify overlaps of federal, state and local authorities in coastal areas and how these overlaps have affected human activity in these areas. He indicated that many laws have attempted to exclude humans from ecosystems. He stated that humans are a part of every ecosystem and that their needs need to be factored into protection strategies. He stated that the staff had been asked to identify examples of these types of strategies for review by the Working Group. He concluded by indicating that the staff had also been asked to collect information on successful management models in order to identify elements of success.

Admiral Watkins expressed his intent for a mid-term report to be generated by mid-summer. The report would not provide recommendations; rather, it would provide an analysis of what the Commissioners have heard thus far in the public meeting process. He stated that the report would eventually be posted on the web for public comment. Commissioner Ballard asked about the timeline of the report. Admiral Watkins responded that a draft should be ready by the Boston meeting in July. Admiral Watkins asked for the opinions of the other Commissioners on this matter, to which everyone agreed that this was a good approach.

Commissioner Borrone expressed the need for the Commission to send a formal letter to the Governors of the coastal and non-coastal states. Admiral Watkins responded that this was a good idea—and a good prelude to the meeting with the CSO in Alaska. Commissioner Sandifer suggested that the Commission contact the Governors directly in addition to the CSO in order that the positions of the states be accurately represented. Admiral Watkins agreed that this was a good idea, especially since the Commission is required by the Oceans Act to consult with the governors of the coastal states. Admiral Watkins concluded by saying that the mid-term report would also be a good mechanism for receiving input from the states.

The first day of the meeting was adjourned at 6:00 p.m.

Tuesday, MAY 14, 2002

Welcome

The Chair called the meeting to order at 8:30 a.m. and briefly reviewed the procedures for the public comment period to be held in the afternoon. The Chair then introduced the members of the first panel.

Tourism, Development and Coastal Management

Mr. David Blane – Director, Office of Planning, Dept. of Business, Economic Development and Tourism, State of Hawaii – Coastal resource management and sustainable tourism

Ms. Gene Brighthouse – Coastal Program Manager, American Samoa Government – Regional perspective on coastal management – Priority issues and challenges in island environments

Mr. James Coon – Vice President, Trilogy Excursion, Ocean Tourism Coalition

Mr. Scott Werny – Oahu Chapter, Surfrider Foundation

Following their formal statements, the panelists addressed specific issues raised by the Commission. Admiral Watkins remarked on the need to examine the CZMA for possible reform. The panelists were asked if they could provide comments, preferably in writing, on how they would change the CZMA and how they would integrate the CZMA with other applicable laws. Admiral Watkins noted that the Commission staff had assembled a bibliographic list of laws that would be addressed in the final report, and that this list would be available on the web for public comment.

Mr. Blane remarked that the CZMA was truly historic legislation. He noted, however, that the implementation of the Act has moved from policy to grant management, and in so doing, the Act has lost its spark. He stated that he would submit a detailed package of specific recommendations to the Commission.

Ms. Brighthouse offered to submit possible changes to the CZMA from an island perspective. Admiral Watkins asked Ms. Brighthouse to focus her comments not only on the CZMA, but also on how related laws work with the CZMA.

The Commission asked Mr. Blane to clarify whether the separate federal agency he recommended be established to administer all ocean-related federal programs would be at the cabinet-level. Mr. Blane responded that, yes, it would be a cabinet-level agency. Mr. Blane was then asked if the new agency would include USACE programs. Mr. Blane responded that, although he has never worked in the federal government, it was apparent to him that every major coastal program is a stepchild within the department where it exists. He noted the coral initiative within the DOI as an example. He commented that what he is asking for is more synergy—not more funding—and offered the creation of the EPA as an example.

The Commission asked Mr. Blane whether or not NMFS would be included within the purview of the new federal agency. Mr. Blane responded that NMFS and USACE would be included.

Mr. Werny was asked by the Commission whether a bottom-up or a top-down approach was needed to develop marine protected areas. Mr. Werny responded that, locally, people will know the best areas to protect and that a bottom-up approach is the best option. The Commission noted that NGOs advocate marine protected areas in places where their members don't live and that this is an example of a top-down approach. Mr. Werny responded that the Surfrider Foundation accomplishes its objectives through local participation and support.

Admiral Watkins noted that the Commission has been inundated with requests to establish a separate independent agency charged with administering marine programs. He commented that, in the case of marine protected areas, local communities seem to do a better job than the federal government at integrating parties at the local, state and federal levels.

The Commission noted that the implementation of federal laws occurs at the state and local levels. It was asked if an integrated entity was created at the federal level, could the states copy or reflect that integration at the state level; in other words, does federal integration have to come first. Mr. Blane responded that he couldn't wait until all of the states operated under cohesive programs. He offered the California program as a good example. He noted that the integration process has to occur simultaneously at the federal and state levels. He stated that the federal government needs to take the lead in order to provide an impetus for the states. The Commissioners requested that Mr. Blane submit more detailed testimony as to how to carry out the consolidation of marine-related programs.

The Commission noted that the need had been expressed for a regional approach to islands management. Ms. Brighthouse was asked by the Commission for his suggestions on models that would bring islands together in a regional cooperative approach. Ms. Brighthouse offered the Western Samoa South Pacific Regional Environmental Program (SPREP) program as an example. The Commission asked Ms. Brighthouse to submit further information on this program. Ms. Brighthouse stated that, in terms of marine protected areas, panelists scheduled for later in the day could offer more models.

Mr. Werny was asked to comment on the role of USACE as a permitting agency for activities that affect the coastal environment, such as harbor dredging. Mr. Werny responded that the USACE is a self-perpetuating agency and that their permitting authority represents a conflict of interest.

The question was asked of Mr. Werny how the Surfrider Foundation defines "fully-protected" in the context of marine protected areas. Mr. Werny responded that this definition needs to be worked out and that it will be forwarded to the Commission at a later date.

It was requested by the Commission that Mr. Blane consider agencies that have not been mentioned in the discussion—such as DOD, NIH and NSF—in his analysis on how the different programs should be consolidated.

It was noted by the Commission that the EPA was not a cabinet-level agency when it was created.

The Commission commented that it has heard a call for national standards for activities such as setbacks, coastal armoring, and jurisdictional boundaries. It was stated that shoreline management regulations issued by the State of Washington caused an explosion in the state, even though the recommendations were mild and needed. The question was asked to Mr. Blane as to whether he was recommending that these types of standards need come from the federal government because the states lack the capacity to initiate them. Mr. Blane was asked whether or not there was political support to do this, and if in so

doing, the federal government would put itself in the middle of land use decisions fiercely guarded by the states. Mr. Blane responded that, if you ask what adverse impacts are caused by land activities, the answer is all of them. He stated that local planning commissions should not be expected to have the capacity or vision to deal with the coastal impacts of inland decisions making. He called for nationwide standards on issues like public access, where different states currently uphold different interpretations of public access and public property. Mr. Blane was asked if he knew if his view was shared by counterparts in other states. The question was asked if there was broad political support for this type of regime. Mr. Blane commented that it is hard for politicians to make unpopular decisions, especially in local arenas. State and local governments, he stated, need the federal government to intervene. The question was asked whether or not Mr. Blane knew if politicians from Hawaii would support this idea. Mr. Blane responded that Congressmen from Hawaii have been at the forefront of CZMA-related issues.

It was noted that the issue of EPA 301(h) waivers had been brought to the Commission's attention at the regional meeting in Los Angeles. Mr. Werny was asked explain the reasons for the waivers and if he knew the number of waivers that had been issued. Mr. Werny stated that he believed that 36 waivers had been issued, but that he didn't have the corroborating data. He commented that the issue is one of economics for the waiver recipients. He stated that further information would be submitted.

Regarding endangered species and marine mammal harassment, the question was asked as to how innocent passage was enforced. Mr. Coon was asked to comment on the need for a change in policy at the national level regarding this issue. Mr. Coon responded that there is a national approach. Because of the recognition given humpback whales and the effectiveness of education on this matter, there have been few violations of the MMPA—the law that prevents vessels from approaching marine mammals within 100 yards. There are, however, no shipping transit provisions. According to the law, every shipping vessel is in violation, however only the most exceptional cases are enforced. He commented that aggressive enforcement of this law in the islands would bring the shipping industry to its knees. He stated that MMPA regulations need to account for vessels with limited maneuverability that do not intend to approach the animals within 100 yards, but cannot prevent it.

Public Statements

Mr. Harold Meheula, president of Native Hawaii Fishing Industries, expressed his concern that the land and fishing rights of native Hawaiians were sacrificed when Hawaii became a state in 1959. He noted that the most pressing future issue is the negative environmental effect of global mining in waters off Hawaii.

Coral Reefs

Ms. Suzanne Schwartz – Director, Oceans and Coastal Protection Division, US EPA – Marine debris

Dr. Charles Birkeland – Assistant Leader, HI Cooperative Fishery Research Unit, USGS/University of Hawaii– An assessment of the status of coral reefs

Dr. Robert Richmond – Professor of Marine Biology, University of Guam– U.S. Coral Reef Task Force: Coral reef mapping and information issues

Mr. David Raney – Chair, National Marine Wildlife and Habitat Committee, Sierra Club– A non-governmental perspective on coral reef issues in the Pacific

Mr. Jim Byrem – Vice President, Ocean Concepts– Importance of coral reefs to the recreational diving community and the need for public education

Once the panelists had presented their formal statements, they addressed questions raised by the Commission. It was noted that there is a difficulty in convincing people who have never seen a coral reef in person of the importance of coral reefs. A question was raised to all of the panelists as to how to

educate the general population on the importance of these resources. Dr. Richmond responded that there is targeted education for stakeholders and policymakers; however, the biggest problem in marine conservation is that most people never get to see what is below the ocean's surface. He commented that there needs to be a national level of attention given to ocean education similar to that given rainforests. He noted that scientists are not taught how to express scientific information in a way that the general public can understand. He emphasized the need to integrate social science with research in order to build a constituency that will influence policy.

Dr. Raney addressed the need to have people in the heartland care as much about fish as they do about farms. He noted that the U.S. Coral Reef Task Force has an education and outreach group that is trying to do just that. He mentioned the salt water aquarium and dive industries as untapped resources for educating the public on coral reef issues. Dr. Birkeland commented that Australia has been successful at educating its citizens on the importance of ocean resources. From the beginning, the Great Barrier Reef Marine Park Authority held public hearings and invited all potential stakeholders and any interested citizens to take part in the decisions concerning development of regulations and the zonation of permissible activities in the Marine Park. The Authority also put extensive effort in educational programs to make the citizens of Australia aware of their heritage and natural resources on the Great Barrier Reef. Ms. Schwartz highlighted the educational significance of larger aquaria located throughout the country. Admiral Watkins requested that the panelists submit to the Commission any specific recommendations they have for incorporating educational programs into laws and regulatory practices.

Dr. Richmond noted that the NW Hawaiian Islands Reserve is comparable to the Great Barrier Reef and that it could be a flagship for public awareness of coral reefs. Dr. Raney warned that there is also a threat of "loving the resource to death." He commented on the potential benefits of remote ocean learning, such as through internet technology. Admiral Watkins commented that there may be a way to use the NSF-sponsored Ocean Observing System program for educational purposes.

The Commission expressed surprise at the statistic given by Ms. Schwartz that 80% of the marine debris found on beaches can be traced to land sources and not to ships. It was indicated by the Commission that the problems of storm water run-off and sewage overflow are more easily addressable than regulating shipboard practices. Ms. Schwartz responded that any statistics need to be taken in context. She noted that the discarding of fishing nets is significant in the Pacific Islands and in the Caribbean. She commented that, nation-wide, the problem is mostly caused by storm runoff and sewage outfalls. She noted that although these causes are mostly addressable—and that there have been significant campaigns to prevent littering—people still litter and inadvertent releases do occur.

Dr. Birkeland was asked to expand on what could be done at the federal level to help fix the problem of marine debris given that most coral reefs are within state waters or are locally controlled. Dr. Birkeland responded that although most of the heavily-impacted reefs are within state waters, the debris cleanup program, which has to date removed almost 200 tons of marine debris from the NWHI coral reefs, has been a multiagency cooperative effort. The lead Federal agency in this endeavor has been the National Marine Fisheries Service (NMFS within NOAA), partnering with the U.S. Coast Guard, the U.S. Fish and Wildlife Service, and NOAA's Office of Marine and Aviation Operations. State organizations such as the University of Hawaii and the Hawaii Coastal Zone Management Program were also partners in the effort. He noted an action plan generated by the U.S. Coral Reef Task Force that mandates that 20% of the coral reef ecosystems be protected and that it is up to the states to figure out how to respond. He stated that funding for management and enforcement—not just for research—is very important.

Ms. Schwartz was asked to comment on the EPA 301(h) waivers and their effect on the problem of marine debris. Ms. Schwartz stated that there are 36 waivers to CWA provided for secondary treatment. Prior to the issuance of a waiver, an evaluation of the outfall is made to determine that there will not be

any adverse environmental impacts. Also, plants with waivers have to meet primary treatment and additional environmental conditions. Finally, she stated that the waivers apply only to coastal waters and not to offshore discharges. She assured the Commission that the EPA takes all of the waivers very seriously and does very serious analyses to ensure that the allowed outfalls are not problem sources. The major problem, she noted, is not with lawful waivers—it is with illegal discharges, as evidenced on some California beaches. She stressed that the ability to track and enforce compliance is a significant issue and requested additional support.

It was noted that, in previous testimony, panelists commented on the difficulty faced when trying to gain access to marine protected areas for bioprospecting purposes. Dr. Richmond was asked to comment on his view of how to accommodate good scientific prospecting. Dr. Richmond responded that a main issue in this area is that of patents. He noted that policy models and agreements do exist that work well to determine the rights of the involved parties. He also commented on the concern about the magnitude of the collections, but stated that this issue can be worked out through proper permitting. Dr. Richmond was asked to provide additional information to the Commission on the models and agreements referenced in his testimony, particularly those that contribute money for the management of the marine protected area.

It was noted that in Dr. Birkeland's testimony, he advocated a set aside of 50% or more of coral reefs for protection purposes. It was also noted that a 20% set aside had been targeted for this purpose by the U.S. Coral Reef Task Force. Dr. Birkeland was asked to clarify what needs to be done to protect the resource and what he considers to be politically feasible. Dr. Birkeland responded that the U.S. Coral Reef Task Force settled on a 20% set aside because it was politically possible to do so. He stated that at 20%, fish populations can be maintained, but yield and spillover would not be as high as they would be at 50%. He commented that an educational campaign is needed to convey the message that, the more area that is closed off, the greater the chance that biomass will increase to historical levels.

The Commission expressed the possible need for a "sunset clause" for restrictions associated with marine protected areas if and when fish stocks become regenerated. A call for creativity in the size and implementation of marine protected areas was voiced by the Commission. Dr. Richmond responded by saying that the concept of marine protected areas is straightforward. The approach is different than the approach laid out in the Magnuson-Stevens Act because it addresses ecosystems and not single species. He noted that these areas should be valued economically for more than just the edible resources, but also for the integrity of the ecosystem (e.g., for ecotourism). He also commented on an idea presented by the Commission to manage marine protected areas on a rotational basis by stating that, yes that can be done, but if the area is completely shut off, positive effects happen more quickly.

Dr. Birkeland stated that village management and no-take designations are needed in order to increase production in coral reef areas. The reason, he stated, is because coral reef fishes are different from pelagic fishes and that recruitment to a coral reef is difficult. He stressed the importance of leaving large fishes in coral reef areas and noted that this would not happen if fishermen are allowed to go in and harvest every once in a while. Spillover, he stated, is a valuable result of no-take areas—as witnessed in the protected area offshore of Cape Canaveral, Florida in the Atlantic Ocean.

One of the Commissioners noted a personal experience in which several private sector companies, including his own, had participated in beach cleanups. The Commissioner expressed interest in an interagency group aimed at addressing marine debris and asked for comments on this idea, and on the need for the U.S. to develop a stewardship ethic with its international neighbors. Ms. Schwartz stated that there is no question that this is a global problem and recommended that the State Department be included in an interagency group. She also noted an initiative in the Caribbean to address solid waste that had been stymied because of a lack of resources. She stated that some domestic efforts are as simple as providing best management practices at marinas.

The question was asked as to the efforts being made by the EPA regarding outreach and education, including the need for resources and the possible collaboration with states and NGOs. Ms. Schwartz responded that there are a number of areas in which the EPA is interested in doing outreach. She noted that the EPA has a very popular web site on marine debris curriculum. She also noted that the EPA does not invest a large portion of their resources in outreach. These resources mostly go into information and brochures to educate the public on EPA programs. She cited the group of coastal education learning centers created by Coastal America as a good example of an outreach program. She also recommended tapping into the existing network of aquaria located throughout the country—not just in coastal areas—to implement outreach and education programs.

It was noted that the Commission is limited as to how it can intervene in a dispute like the one over the NW Hawaiian Islands Reserve. It was also noted that it is possible for the Commission to look at systemic problems as they relate to various agencies that are charged with protecting the oceans. Specifically, the Commission will look at the responsibilities of councils to both allocate fish for harvest and to establish TAC, or harvestable limits. The panelists were asked for their views on the recommendation to separate out these two functions. Dr. Richmond responded that Magnuson-Stevens Act and the development of the councils presents a huge issue in the sustainability of natural resources and needs to be restructured. He noted that he was angered by the fishery management plan recently issued by the Western Pacific Regional Fishery Management Council. Mr. Raney commented that the separation of the two functions makes sense and would be helpful. He also expressed the need to open up the council process to stakeholders who are not represented on the council. He noted that he believes the USFWS to be the appropriate body responsible for ecosystem management with a focus on protecting endangered species, but that this agency is being inappropriately overpowered by the fishery management councils.

The question was asked as to the need to establish structures in government to address specific problems internally as they arise—and if the U.S. Coral Reef Task provides a good model for this type of structure. Mr. Raney responded that the need to establish a task force arises from the inability of the governance structure to deal with a specific problem. In this way, a task force represents a systemic problem in the governance structure. He stressed the need for a structure that is broader in scope and that is forward-looking. He stated that the U.S. Coral Reef Task Force is an excellent model because it involves collaboration between states, territories, NGOs, and several federal agencies.

Admiral Watkins noted that a problem with task forces is that they address a specific issue on a temporary basis. The question, he stated, is how to systemically incorporate issues like those addressed by the U.S. Coral Reef Task Force into the structure of government. He asked if the U.S. Coral Reef Task Force had come up with systemic recommendations, and if so, which agencies/entities had been assigned the responsibility for carrying out the recommendations. Dr. Richmond responded that the task force had not only produced recommendations, but also implementation strategies.

Ms. Schwartz responded that you cannot hope to solve problems by only examining the vertical structure of agencies, but that certain issues will always cut across agency and other governing body lines. The goal, she stated, should be to reduce the problems by integration. She offered as an example the watershed approach taken by the EPA that incorporates a lot of different groups. She stressed the need for such groups to develop plans that include action items and accountability for all involved parties. She also noted the difficulties created by FACA to reach out beyond the Federal agencies to incorporate other parties.

Oceans and Climate

Dr. Roger Lukas – Professor of Oceanography, University of Hawaii at Manoa – Understanding the ocean’s role in climate

Dr. Nancy Davis Lewis – Director, Research Program, East-West Center– Cooperative international efforts on climate

Dr. John Craven – Founder and President, Common Heritage Corporation– Alternative energy sources: outlook and issues

Once the panelists had presented their formal statements, they answered questions raised by the Commission. Admiral Watkins began by addressing the subject of nuclear waste disposal. He stated that neither he nor the American public as a whole would support ocean disposal of nuclear waste until capabilities are established that can prove such a system is safe. He stated that there are many obstacles in society that would preclude support for the development of such capabilities. Dr. Craven responded by stating that the public only reacts when there is a crisis. When a crisis comes, he stated, the public turns to those who have already developed the technology to solve the problems. Admiral Watkins responded that, although the position expressed by Dr. Craven is a logical one, the Commission would not have a lot to do with generating enthusiasm for these types of technological advances.

It was noted that many people do not recognize the importance of time-series measurements for climate change research. Dr. Lukas was asked to describe the number of current time-series measurements being made and the supporting management structure behind them. Dr. Lukas responded that there are several time-series activities being conducted in U.S. coastal areas. The real need, he stated, was to conduct more of these activities in the deep ocean. He stated that it is often a struggle to move away from ship board measurements and toward the establishment of autonomous systems. He recommended setting up a new governance system to facilitate the development of research equipment and secure resources.

The Commission commented that most of the current time-series measurements are maintained by universities and not operational agencies. It was asked whether or not this should change. Dr. Lukas stated that there is still a need to learn more about how observing systems would be most effective. He recommended that a partnership be formed between government, the private sector, and academia to develop an evolutionary model.

Dr. Lewis was asked to address the need for a mechanism to connect research data, such as data from time-series measurements, to decision makers. She responded that getting forecast information into the hands of end users is predicated on several years of field work developing a knowledge base. She stated that it has been a hands-on effort in the Pacific to get the data into a useful format and that there are cases now where managers are doing their own forecasting.

It was noted that not much has been heard about ocean thermal energy conversion (OTEC) for several years. Dr. Craven responded that OTEC is still important for the future; however, it would take 15 to 20 years before a plant of very large magnitude could be developed and placed in the ocean. He noted the fact that the American public is unable to quantify what it would take to develop alternatives to oil. He also stated that, no matter how fast a system is developed, it would take 60 years to have an impact on the world’s energy supply.

It was noted that the current process to establish and operate deep water observing systems seems to be working and it was asked what problems, if any, the Commission should examine. Dr. Lukas responded that the system is not broken, it is being developed. He stated that, as the understanding of climate variability has increased, the scope of what we need to examine has expanded. In addition, there is a need to go global with the observing systems and that has not been done yet, except by satellites. He stated that the Argo system is being implemented, but that only a fraction of the associated floats are operational. With regard to the role of the private sector, Dr. Lukas responded that there are data

available from oil platforms with highly sophisticated instrumentation, but that it costs money to make the data available to the public. The Commission commented that it should be cost effective to capitalize on the investments made by the private sector. Dr. Lukas responded that it has been shown to indeed be difficult to effectively integrate the differing demands. Admiral Watkins added that these measurements need to have a biological component and need to be conducted in a sustained way.

Admiral Watkins remarked that the relationship between climate and human health has not been nationally recognized. In the same way, he stated that small attention was given the AIDS crisis when he headed the AIDS Commission. He commented that, in both of these cases, there was not a catalyst to generate public attention. Dr. Craven responded to Admiral Watkins comments by stating that there is tremendous learning in the second—and not the first—kick of the mule. A minor kick, he remarked, occurred in California a year or so ago regarding the energy crisis. Now, a major kick is coming in energy. He told Admiral Watkins that the work of previous commissions has not been wasted. Rather, when the second kick comes, recommendations will be followed and alternatives implemented. He stated that that is the nature of our society.

Dr. Lewis was asked to comment on the Pacific ENSO Applications Center. It was noted by the Commissioners that the Center functions separately from the NOAA/CPC Regional Climate Centers. Dr. Lewis responded that she was not involved in the creation of PEAC, but that it was a grassroots effort involving the University of Hawaii, the University of Guam, the National Weather Service, and the Pacific Basin Development Council. It involved end-users early in the effort and the forecasts during the 1997-1998 event mitigated the impact in the region. Dr. Lewis was asked to provide an assessment of the linkages between current programs and the need to create and sustain additional regional and international partnerships to share resources and learning.

In response to a question on ocean observing systems, Dr. Lukas noted the successes of NOPP to integrate efforts being done in this area. He stated that one of the areas that needs attention involves turning ocean observations into ocean state analyses and products. He stated that data assimilation nodes are being developed to work on different parts of the problem; for example, one of the nodes will address biogeochemical interactions.

It was noted that, although much has been heard by the Commission on observing systems, with the exception of an experimental unit at MBARI, not much has been heard on the integration of biological observations. Dr. Lukas commented that at a recent meeting in Vancouver, his colleagues were excited about the prospect of including in situ measurements of nutrients and other biological observations. He stated that there currently was a push to incorporate biological measurements, but the question remains as to the appropriate level of observations. He cited a NSF initiative to enhance the technology needed to perform these types of observations.

Admiral Watkins reiterated the need expressed by Dr. Lukas for thought to be put into the architecture and design of the biological component of an observing system. Regarding the statement of Dr. Lewis, Admiral Watkins thanked her for her comments on behalf of the East-West Center and noted that her remarks would help the Commission in its consideration of how the U.S. should become involved at the international level.

The Commission noted that not much activity related to ocean thermal energy conversion (OTEC) had occurred since Congress passed The Ocean Thermal Conversion Act in 1980. Dr. Craven was asked if he had recommendations for policy and/or incentives that would keep the idea of OTEC alive and encourage the exploration of future possibilities regarding the use of thermodynamic energy. Dr. Craven responded that attention has shifted away from the generation of electricity and towards alternative uses such as aquaculture. He stated that it had been discovered that fish farms can operate successfully in deep ocean

water and recommended that a major program be established that would increase the production of marine protein using deep ocean water as a primary resource. Regarding OTEC, he remarked that this type of activity would not be competitive with other uses unless it was pursued on a very large scale. He recommended concentrating on other aspects of the energy resources of deep ocean water, including the use of this water for cooling purposes. It was requested that Dr. Craven provide additional information to the Commission that shows the distribution of deep water around the world where cold water applications could be generated. Dr. Craven stated that this process could occur in all parts of the ocean that are deeper than 3000 feet, which means that the resource is plentiful.

Ocean Use and Management

RADM Robert F. Willard – Deputy Commander in Chief, and Chief of Staff, U.S. Pacific Fleet – U.S. Navy-Stewardship and encroachment issues

Mr. Lelei Peau – Deputy Director, Department of Commerce, American Samoa– Pacific Island approaches to ocean resource management

Mr. Timothy Johns – Chief Operating Officer, Estate of Samuel Mills Damon– NW Hawaiian Islands process

Once the panelists had presented their formal statements, they addressed questions raised by the Commission. It was noted that the Navy is the largest investor in the science of acoustics as it relates to marine mammals. It was suggested that the Navy may be able to achieve a ‘Most Favored Nation Status’ in the eyes of the regulating environmental agencies because of their performance as stewards and because they require their research to be transparent. It was stated that the Commission had a similar proposal presented to it at the Florida meeting. It was asked whether or not this was a good suggestion to consider as a Commission recommendation. RADM Willard responded that the Navy is involved in acoustics and marine mammal research in many ways. He discussed an incident that occurred in the Bahamas involving the beaching of several whales. He remarked that, after this incident, the Navy entered into a dialogue with the agencies of concern to put together the circumstances and determine the probable cause. What resulted, he stated, was agreement as to which mitigation measures would be applicable to similar future operations in order to minimize marine mammal impacts. He corroborated the comment made by the Commission that Navy research findings are open and transparent. He added that, in view of the expertise of the Navy in these areas, it would make sense for the Navy to function as a go-to agency for research on marine mammals and acoustics. He also concurred with the suggestion offered by the Commission to grant the Navy ‘Most Favored Nation Status’.

Mr. Johns was asked to articulate his concerns with the process of turning the NW Hawaiian Islands Reserve into a National Marine Sanctuary. Mr. Johns responded that he hoped that the spirit of the reserve did not get lost in the sanctuary process. He stated that some members on the Reserve Council were concerned that the sanctuary process may undermine the guidelines set out in the Executive Orders.

Mr. Johns was asked by the Commission to clarify his comments on the level of protection intended for the Reserve by the Executive Orders, and if this level of protection was being supported by federal agencies. Mr. Johns responded by saying that all recent indications is that the federal agencies—and the current administration—support the level of protection prescribed in the Executive Orders. It was asked whether or not the appropriate protection needed to be prescribed in statute. Mr. Johns responded that no statute would be needed if and when the sanctuary process is completed and the preservation and conservation measures of the Executive Orders are maintained.

Mr. Peau was asked to provide insight on the U.S. Coral Reef Task Force. Mr. Peau began by referencing the 1993 United Nations meeting on the sustainable development of small islands held in Barbados. The U.S. came to the table, he stated, and introduced a proposal for coral reef protection and conservation. An

all-island strategic action plan was developed in 1994, which served as a model for the formation of the Task Force in 1998. Since its inception, he stated, the Task Force has been known as a leader. He noted a situation in American Samoa where a hurricane had washed most of the longline fleet ashore. In the past, it had been frustrating for the American Samoan government to seek assistance from the federal government in situations like this. The Task Force, he stated, allows partnerships to be made between federal and local governments, which helped to streamline previously difficult situations. Mr. Peau then mentioned the recent celebration of the U.S. treaty with American Samoa that took place on April 17 and involved longboat racing. He stated that locals have practiced the art of navigation in longboats for transportation purposes for over 1000 years. The celebration, he stated, brought to the youth the importance of ocean resources to the community.

It was noted by the Commission that, without the Task Force, local communities would have difficulty expressing their views. It was asked if this forum includes international players as well. Mr. Peau responded that there is both a domestic and international agenda—one represented by the Coral Reef Task Force and the other represented by the South Pacific Regional Environment Program (SPREP). He stated that the lessons learned from the Coral Reef Task Force are being passed on to the SPREP by shared membership. He offered to provide the Commission with more information on the two models.

The Commission commented on the outstanding naval facilities that they had toured in the Gulf of Mexico and in California. It was asked whether or not it was possible for some of the huge investment that is now made for research and technology to be directed towards the development of training approaches that would have less of an impact on biological and other marine resources—instead of asking for relief from regulations that the rest of society has to comply with. RADM Willard explained that a good amount of investment already goes in that direction. He stated that there are mitigations in place that are intended to protect the environment as the Navy's mission is carried out. He remarked that, a sizable portion of the money invested annually in environmental conservation is used to establish operations that are compatible with the environment, especially in the area of training.

It was noted by one of the Commissioners that, as an American citizen, the subject of encroachment raises concern because of the need for national security. It was brought to RADM Willard's attention that a three-fold increase in the size of the Channel Islands National Marine Sanctuary could encroach on naval operations, especially since there is a proposal to eliminate past grandfathering of important activities conducted by the Navy and the Air Force. It was noted that if these proposals had been made in the area covered by the CZMA, any NOAA action would be subject to the review of the Secretary of Commerce, who could override the action on the grounds of national security. It was asked whether or not, in the situation with marine sanctuaries, NOAA could make these types of decisions without any oversight or review. Admiral Willard responded that he did not know the answer to this question, but that he could direct his staff to find out more information. He also stated that he did not know if such a review would be necessary if the Navy was involved in a dialogue early on. He stated that he believed that naval operations could be compatible with such initiatives. What is important, he remarked, was that the needs of the Department of Defense and Navy operations are understood and that there is a dialogue between us and the agencies that are involved in protecting the environment. He stated that grandfather clauses were never intended for the Navy to operate without regard for the environment. He was concerned, though, that those deliberations not impede Navy operations to the extent that every time the Navy wants to conduct otherwise authorized activities, it is delayed from doing so.

The Commission remarked on the situation in which the Navy was tasked with completing a time-intensive environmental assessment before it could use SURTASS LFA. It was stated that, during this delay, American citizens were not fully protected by the latest and best technology. It was noted that there must be an appropriate balance between the protection of wildlife and the security of the nation—especially in the face of current terrorist threats. RADM Willard responded that one thing that could be

done is that applicable environmental regulations and standards could be better defined in order to shorten the delays involved with completing an Environmental Impact Statement. He stated that, in the Navy's view, the language of the applicable laws warrants continual review. Where it is clear that we are at odds, he responded, it is incumbent on all parties to try to resolve the situation.

Admiral Watkins noted that the Department of Defense was one of the agencies that resisted the Oceans Act of 2000. He stated that, even though the Act does not say much about national security issues, the Commission realizes that its recommendations may impact this area and have requested input from the Department accordingly. He encouraged RADM Willard to ask the Secretary of Defense to provide more specific input to the Commission regarding the Department's position on these issues. This request, he stated, applies to the State Department as well. He asked that the Department of Defense clarify to the Commission what it is the Department wants the Commission to do. In response, he stated, the Commission will work it out in a way that is environmentally sound.

The Commission asked Mr. Johns if there was a better way to establish reserves than the process described in earlier testimony. Mr. Johns responded by saying that one take-home message from the testimony is that it is never going to be easy to establish a marine protected area. He noted, however, that there are a few lessons that have been learned. He stated that, despite a difficult birth, the sanctuary review process should work out a lot of issues. He remarked that there needs to be more bottom-up than top-down involvement. He stated the need to get stakeholders involved early and often. Plans crafted from inside the beltway and then shipped out to Hawaii, he stated, would not work out in the long-term. It was requested that Mr. Johns provide recommendations to the Commission on structures that would both engage the local stakeholders and provide for the national interest. Mr. Johns agreed to provide an additional detailed statement. He then stated that there should be a national commitment to marine protected areas, but that the genesis of these areas should occur at the local and state levels. When asked how the federal government could make the process easier, Mr. Johns responded that actions taken by regional offices of federal agencies to work with the community would be a big start. He stated that a cultural approach—and not statutory changes—is needed.

Public Statements

Mr. Peter Etnoyer, Staff Scientist at the Marine Conservation Biology Institute (MCBI) and Surfrider Foundation volunteer, commented on the importance of government data collection and distribution efforts. He remarked that free access to data supplied by government entities such as the Navy Research Laboratory, NASA, National Oceanographic Partnership Program and the Center for Atmospheric Research is unique to the United States and should continue to be supported and encouraged. He also stressed the importance of establishing no-take zones, which he described as a cost effective and efficient management strategy for increasing biomass. He recommended that the Commission enlist the help of its science panel to establish no-take targets for National Marine Sanctuaries. Finally, he addressed the issue of water quality—particularly the problems in Southern California that have led to several days of beach closures—and implored the Commission to encourage responsible wastewater management and water quality monitoring programs at the community level.

Dr. Patricia Fryer, Senior Research Scientist in Marine Geology at the University of Hawaii and current Chair of the Deep Submergence Science Committee of UNOLS, addressed the importance of occupied submersibles and expressed concern over the movement among some scientists to replace these types of submersibles with remotely operated vehicles (ROVs). She noted six critical areas in which occupied submersibles far exceed the capabilities of ROVs: engagement of the operator, visibility from the vehicle, maneuverability, unobtrusiveness, reliability, and the capacity for education, outreach and recruitment. She noted that a position paper is being prepared by the Deep Submergence Science Committee that will be presented to the Commission.

Scott Atkinson of The Nature Conservancy noted that, although there have been good efforts at coral reef conservation, long-term conservation will not be possible without the proper resources. He commented on the protection benefits generated by current marine protected areas, but noted that the scale of involvement relative to the magnitude of the threats to coral reefs is “no contender”. He expressed the need for money and staff resources to develop and maintain a network of marine protected areas in order to address the need for adequate biological representation, protection of ecosystem process and large scale coverage of the coral reef environment.

Mr. William Friedl, Chairman of the Hawaii Section of the Marine Technology Society (MTS), reiterated the needs expressed to the Commission on 13 November 2001 in Washington, DC, by Andrew Clark, the President of MTS. Those needs are: support for new technologies that foster commerce in, on and under the oceans through an “Office of Ocean Technology” within NOAA; a commitment to systematically “refresh” technical marine capabilities and upgrade or replace facilities that support ocean activities; development of an integrated ocean observing capability; support for a baseline program to map the oceans, census their content and document the findings; a commitment to reliable and secure transmission of information on, through and over the sea; and a commitment to foster emerging technical fields with potential commercial applications, such as marine-based biotechnology or advanced undersea vehicles. Mr. Friedl commented that technically based small businesses are important agents for the transition of technology from academia to military and commercial applications. He asked the Commission to consider the commercial ocean technology sector in Hawaii in its recommendations and to assure that the nation’s ocean development programs remain open, competitive, and dynamic.

Mr. John Cates of Cates International remarked that offshore aquaculture is the wave of the future. He noted that aquaculture is part of maintaining sustainable fisheries and commented on his efforts at the University of Hawaii to create the technology for raising fish in open ocean pens. He stated that there is a lot of positive impact associated with offshore aquaculture, including the replenishment of fish around the open ocean pens.

Dr. John Wiltshire, Associate Director of NOAA’s Undersea Research Laboratory at the University of Hawaii and an officer of the Marine Technology Society, commented on the unfortunate present state of marine technology compared to its potential. He noted that the ocean community needs new exploration systems to exploit opportunities in future drugs, energy solutions, and food, mineral and freshwater production. He noted that a main reason for the lack of government funding going into ocean research programs is that the ocean community has not captured the public interest in the same way as it has been captured by the space community. He urged the Commission to raise the visibility of the highly underutilized potential of the marine technology sector.

Dr. Linda Paul, Executive Director for Aquatics, Hawaii Audubon Society, offered specific comments on living marine resource policy. She stated that living marine resources are public trust resources and that harvesting these resources is a privilege and not a right. She commented that a precautionary approach to natural resource management requires that, in the absence of sufficient data on which to base safe and reliable predictions, the burden of proof must shift from the data collectors to those proposing actions that may negatively impact the natural systems. She recommended retiring the Magnuson-Stevens Act and creating a new Living Marine Resources Conservation and Management Act in its place that would manage fisheries in an ecosystem context. She also requested that at least 25% of aquatic habitat be set aside as no-take refuges. She championed the idea of community-based management and recommended the prohibition of gill nets and other gear that negatively impacts the seafloor. She also recommended that the importation and processing of shark fins be prohibited in the U.S. She noted the problems in the saltwater aquarium and live fish trade and concluded by advocating the extension of the Department of Interior’s jurisdiction to the entire U.S. EEZ under the Migratory Bird Treaty Act.

Dr. William Steiner, Director of the USGS-Biological Resources Discipline (BRD), reiterated the issues presented by Dr. Charles Birkeland in earlier testimony to the Commission, which included: anthropogenic impacts such as over-harvest, sedimentation, agricultural runoff, fouling, and poor management of tourist activities; natural disasters such as algal overrun of coral reefs; and long term changes associated with global climate change and ocean rise. He summarized the activities of the USGS in the Pacific that provide unbiased information to Department of Interior Land and Marine Managers and concluded by offering recommendations to the Commission that would facilitate Federal research on marine stewardship issues in the Pacific. These recommendations included: provide immediate funding for the creation of a USGS facilities infrastructure program to build a set of marine research laboratories throughout the Pacific; create a \$10 million/year program within USGS aimed at biological support for DOI managers or marine resources; and modify Federal law to make it easier for universities, NGOs, business interests and federal agencies to form joint, long-term research projects.

Ms. Mindy Jaffe, a Republican member of the Hawaii State Legislature, told the Commission that she had signed up to offer public comment after she had read a newspaper article written on VADM Lautenbacher's testimony given the day before. She stated that the article had misrepresented Admiral Lautenbacher's comments and was glad to know that the Bush administration continues to support the Executive Order that established the NW Hawaiian Islands Reserve. She also commented on the ability of the local community to handle the reserve process, while noting that the West Pacific Regional Fishery Management Council makes it hard for the environmental community to be heard.

Dr. Thomas Farewell, President and CEO of Oceanic Institute, stated that the Oceanic Institute is the largest marine aquaculture institute and a leader in the protection and conservation of coral reefs. He recommended that the Commission devote an entire panel of testimony on aquaculture and make an effort to investigate this subject. He stated that the world-wide aquaculture industry is growing at a rate of 12 percent per year, but that the U.S. is not a major player in this movement. He commented on the need to invest in a sustained research program dedicated to taking the offshore aquaculture system to the next level.

Ms. Teresa McHugh of the Trust for Public Lands noted the importance of coastal lands in the overall ocean protection agenda. She commented on her work with NOAA and Congress to develop the Coastal and Estuarine Land Conservation Program to address the threatened state of coastal lands. She stated that it is important to protect the environmental integrity of these lands as well as to preserve cultural heritage and public access rights.

Mr. Peter Wilson, president of Global Ocean Consultants, commented on the need to better manage the tuna resources in the Western Pacific. After a detailed review of his background in the tuna industry, he remarked on the U.S. effort needed to help Pacific island nations establish their own tuna fishing and processing industries. If not serviced by the U.S., he stated, these industries will be created and run by foreign countries.

Dr. Richard Grigg, Professor of Oceanography at the University of Hawaii, addressed a question raised during the panel on coral reefs as to the importance of coral reefs to America's heartland and the present administration. In his response, he noted the analogy of the canary in the mine. He stated that coral reefs are like the canary in the mine, and that if the canary dies, the miners die. He went on to state that many of the problems threatening the health of the coral reefs—such as over-fishing, pollution, sedimentation, etc.—are symptoms of two larger issues: over-population and a consumer-driven economy. He stated that measures need to be taken to stem population growth and strive for sustainability.

Mr. Jonathan Kelsey, resident of the State of Hawaii, commented on the uniqueness of the Pacific islands community and addressed four issues for consideration by the Commission. First, he noted the need for resources to support sustained, comprehensive coastal and ocean management in the face of the islands' three main economic systems—marine extractive activities, tourism, and federal activities (e.g., military). Second, he recommended that the Commission provide the flexibility needed to accommodate the local, traditional forms of governance in the region. He stated that policy recommendations from the Commission must allow for regional coordination—both international and domestic—due to the remoteness of the region (relative to the U.S. mainland) and the proximity of the region to their international neighbors. Finally, he stated that policy recommendations need to allow the flexibility to address the unique ocean and coastal environmental characteristics of these islands.

Mrs. Timm Timoney, a Northwest Hawaiian Islands bottom fisherman, stated that she and her husband fish by hook and line in a sustainable way. She expressed concern over the management of the NW Hawaiian Islands by the “club” of the Executive Orders and stressed the need to include fishermen in the development and implementation of a management plan for the area.

Mr. Louis (“Buzzy”) Agard, fish broker and former President of the Ahi Tuna Boat Association, voiced his support for strong management of the NW Hawaiian Islands Reserve in order to sustain fish populations. He stated that area of the Reserve should be valued as an operating ecosystem and he stressed the need to conduct further research on the impacts of extractive activities.

Mr. Fred Madlener of Life of the Land noted that the ocean is a public trust resource and that public trust rights should be acknowledged by the Commission and by all U.S. citizens. He stated that both nearshore and coral reef resources are being threatened and that not enough is being done to conserve the ocean environment.

Ms. Cha Smith, Executive Director of Kahea, the Hawaiian-Environmental Alliance, indicated that she had been involved in the planning of the NW Hawaiian Island Reserve from the very beginning. She noted the magnitude of public participation in the process—and indicated that most of the public input had been in support of the protection of this area. She remarked on the uniqueness of the area and emphasized the need to look at what the area needs for protection in order to preserve it for the next generation. She noted that there are eight active fishermen in the area and that these fishermen had been grandfathered into the reserve and would be grandfathered into the sanctuary. She commented that their fishing efforts do not present an impact on the area.

Mr. Isaac Harp of Kahea, the Hawaiian Environmental Alliance, indicated that he had grown up in a family that was dependent on the ocean's food resources. He noted his participation in the planning of the Humpback Whale National Marine Sanctuary and the NW Hawaiian Islands Reserve. He stated that industry-driven resource management (such as is the case with the fishery management councils) is causing the extinction of the resources and should be removed. He indicated his support for a community-based plan that involves input from all interested groups.

Dr. Stephanie Fried of the Environmental Defense Fund stressed the fact that Hawaii is vastly different from many other areas and that the NW Hawaiian Islands Reserve process is vastly different from any other sanctuary designation process. She stated that the vast and numerous presences of turtles, seabirds and other marine wildlife, and their importance to the culture and economy of Hawaii make this area a “no brainer” of a reserve. She indicated that the fishermen in this area had been grandfathered into the reserve based on reported catch figures and that the only real opposition to the reserve came from members of the Western Pacific Regional Fishery Management Council. She noted that, in this case, the quasi-federal entity had taken on an activist role. She concluded by indicating her support of the Executive Orders and of a citizen-based reserve council.

Appendix 1
May 13 & 14, 2002 Ocean Commission Meeting Attendees

<u>Name</u>	<u>Affiliation</u>
Louis Agard	KAHEA
W. Tyson Aldinger	ORINCON
Scott Allen	No Affiliation Given
Scott Atkinson	The Nature Conservancy
Ignacio Aguerrevere	No Affiliation Given
Daniel Basta	NOAA/Office of National Marine Sanctuaries
CDR Rick D. Bastien	US Pacific Command
Rita Beamish	AP
Snowbird Bento	No Affiliation Given
Glenn Boledovich	NOS/NOAA
Christine Brammer	HI Humpback Whale NMS
Todd Brennan	Island Marine Institute
Kassandra (Kasey) Brown	Oceanographer of the Navy
Patrick Caldwell	NOAA/NESDIS/NODC
John R. Cates	Cates International
Kelvin K.Y. Char	NMFS/NOAA
Chris Chung	State of Hawaii, Coastal Zone Management
Athline Clark	State of Hawaii, Dept of Land & Natural Resources
Andy Collins	NOS/NOAA
Edward J. Cook	USN
Jim Cook	Pacific Ocean Producers
Elizabeth Corbin	State of Hawaii, Dept. of Business, Econ Development & Tourism
John S. Corbin	State of Hawaii, Dept of Agriculture
Sean Corson	NOAA
RADM (sel) Donna Crisp	US PACFLT
Nancy Daschbach	NOAA/National Marine Sanctuary
Steven Dollar	Marine Research Consultants
Derek Esibill	Sea Education Association
Peter Etnoyer	Marine Conservation Biology Institute
Thomas E. Farewell	The Oceanic Institute
Frank Farm Jr.	West Pac Regional Fishery Council
Amy Fraenkel	US Senate
Stephanie Fried	Environmental Defense
William A. Friedl	CEROS
Patricia Fryer	University of Hawaii at Manoa
Frank Grandau	NAVPAC Meteorology & Oceanography Ctr
Richard W. Grigg	University of Hawaii
Isaac Harp	KAHEA
CDR Mary Helinski	CINCPACFLT
Paulo Heyman	Surfrider Foundation
Rebecca Kimball Hommon	U.S. Navy, Navy Region Hawaii

Eldon Hout	NOS/NOAA
Rep. Mindy Jaffe	State House
Kirsten Johnson	No Affiliation Given
Dave Karl	University of Hawaii, Dept. of Oceanography
Grace Kelly	Commissioner Paul Kelly's Spouse
Jonathan D. Kelsey	NOS/NOAA
Darcee Killpack	NOAA/NOS Pacific Service Center
Cindy Knapman	Western Pacific Regional Fishery Council
R. Michael Laurs	NMFS/NOAA
Jo-Ann Leong	HI Institute of Marine Biology
Robert Long	CINCPACFLT
CDR Jeff Luster	CINCPACFLT, USN
CAPT Karen Lynn	CEC, USN
Fred Madlener	Life of the Land
Lorenz Magaard	University of Hawaii at Manoa
Janet Mandrell	Makai Society
Michael L. Markriel	State of Hawaii, DLNR
Sean Martin	Hawaii Longline Association
David Mattila	HI HWNMS/NOAA
Kris McElwee	NOAA/Pacific Services Center/TPMC
Naomi McIntosh	NOAA
Harold H. Meheula Sr.	Native Hawaiian Fishing Industry
Roy N. Morioka	Western Pac Regional Fishery Mgt Council
Luisa Muller	No Affiliation Given
Ann Ogata-Dehl	State of Hawaii Coastal Zone Mgmt Program
Linda M. B. Paul	Hawaii Audubon Society
Brian Pawlak	NOAA
Rebecca M. Pollock	State of Hawaii, Office of Planning
Anne Reisewitz	NOAA Sanctuary
Manning Richards	Common Heritage Corp
Dorota Ryszk	High Tech, Inc.
Liza Simon-Tuiolosega	HIHWNMS/State Office DLNR
Cha Smith	KAHEA
Robert Smith	NOS/NOAA
Joshua Stanbro	Trust for Public Land
William Mokahi Steiner	USGS Pacific Island Ecosystems Research Ctr
Michael Tosatto	U.S. Coast Guard
Jeffrey S. Walters	HI Dept of Land & Natural Resources
David H. Weidler, Jr.	Meteorology
Scott H. Werny	Surfrider Foundation
Anlani Wilhelm	NOAA, National Ocean Service
Peter Wilson	Global Ocean Consultants
Wendy Wiltse	EPA
John C. Wiltshire	University of Hawaii