MARINE PROTECTED AREAS FEDERAL ADVISORY COMMITTEE

RENAISSANCE WAILEA
MAUI, HAWAII

TUESDAY
SEPTEMBER 21, 2004

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AGENDA

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MAUI, HAWAII TUESDAY, SEPTEMBER 21, 2004 8:06 A.M.

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CHAIRPERSON BROMLEY: We have a special Hawaiian treat that you're awaiting. So that's the reason for the pause here. If you'll bear with us just a moment.

(Pause.)

DR. CHATWIN: Aloha everyone. Finally I get to welcome you to Hawaii. But we have a very special welcome this morning. Uncle Kimokao and Maui Nui Okama have come here to welcome you all to Hawaii.

Uncle Kimokawo.

(Hawaiian welcome entertainment presented.)

MS. WENZEL: Thank you very, very much for that wonderful welcome. I'm the designated federal official for this committee. My name is Lauren Wenzel, and I call the meeting to order. And I now would like to turn it over to our Chair, Daniel Bromley.

CHAIRPERSON BROMLEY: Thank you. Thank you, Lauren. Terry, thank you for arranging that. That was a profound, sobering welcome, mandate, metaphor, and I think we all ought to act in the spirit of what we just heard, the traditions, the history of what

they represented. Our task is to think about marine protected areas, and I cannot imagine an opening that is more fitting than what we just saw.

Carol Dinkins is here. Carol, we're really happy to have you with us.

MS. DINKINS: Thank you. It's great to be back.

CHAIRPERSON BROMLEY: Life's good, Carol. Hang in there. Great.

Joe is not with us. Joe has UFO -- or FUO -- what is it? -- FUO, fever of unknown origins, which is related to UFOs, but in a different way. So Joe is convalescing, but getting better, I guess. So that's nice.

I think I'm supposed to approve the minutes before I do this other stuff. So I guess at this point I should look official and ask for a motion to approve the minutes from our April meeting.

MR. LAPOINTE: So moved.

CHAIRPERSON BROMLEY: It's been moved by George Lapointe, I gather. Second, is there one?

MR. RADONSKI: Second.

CHAIRPERSON BROMLEY: Gil Radonski has seconded it. Is there any discussing about the

minutes, any corrections that need to be made?

(No responses.)

CHAIRPERSON BROMLEY: Hearing none, I will call the question. All in favor of approving the minutes from our April meeting say "aye."

(Vote taken.)

CHAIRPERSON BROMLEY: Good. Brian Melzian -- where is Brian? -- yes, Brian joins us as the ex-officio member from EPA. We tried very hard to get you here, Brian, and we're very delighted that you're with us now. Do you want to say a word or two about your interests and so on, please?

DR. MELZIAN: Thank you. I'm Brian Melzian, and I'm here representing the United States Environmental Protection Agency. Specifically, I flew in from little old Rhode Island, where I work at the EPA Atlantic Ecology Division. What I'll be doing this morning -- just take less than five minutes -- is three major topics.

First is that this brings back some memories, mostly fond, of working in Hawaii previously when I was the regional oceanographer in EPA Region 9 in San Francisco. Specifically, we actually held some Yorktown exercises that some of you may remember with

the Regional Response Team -- Oceana Regional Response Team -- about how to respond to oil spills out in the Oceana Region, including whether and if and should we use oil dispersions in responding to oil spills. So I participated in those exercises, including teaching classes in oil chemistry at the foot of Diamond Head.

Another exercise that I've previously been involved with -- it was off the Big Island -- Hamakua Coastline -- where EPA used a Coast Guard cutter, the Cape Cross, and made it into an oceanographic vessel so we could survey the impact the sugar cane mills had on the marine environment, specially the ahermatypic coral environments in that area.

So it's great to be back in this area of the country. It's very beautiful.

Secondly, I've been handing out two handouts for the committee. I won't spend much time talking about them. The first one has to do with organizational structure and how we'll relate to the marine protected area national network if it's established. Briefly, EPA is 18,000 employees, and 6,000 of those are located in Washington, D.C. Of the remaining 10,000 -- excuse me -- 12,000 employees, we have ten regional offices. For example, the regional

office for this area of the country is EPA Region 9 in San Francisco, which is California, Arizona, Nevada, Guam, American Samoa, Hawaii and the Pacific Trust Territories. It's through these ten regional offices where the rubber hits the road as far as enforcing environmental laws and statutes in collaboration and in partnership with the states, the territories and the Indian tribes.

I just highlighted in yellow where I'm located. The remaining 2,000 is in the Office of Research and Development. I'm representing the Administrator of EPA and the Assistant Administrator at this meeting today. So we have assistant administrators for the Office of Research and Development, and as you can see, the other offices that are located there. I'm specifically within the National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division.

And then lastly, I'm distributing a handout about, what does EPA do anyway? What laws and statutes do we enforce in working, again, in partnership with tribes, territories, states and other federal agencies? Since its inception, EPA has been involved with and is now utilizing, as mandated by

Congress, more than 12 environmental statutes and laws, as you'll see from this handout. Some of them which are germane to the proceedings of the Marine Protected Area Federal Advisory Committee are acts like the Clean Water Act, and believe it or not, the Clean Air Act, because much deposition of anthropogenic pollutants occurs in the coastal zones from air emissions. So the Clean Air Act, Clean Water Act, Marine Protection Research and Sanctuaries Act, which helped establish this Humpback National Marine Sanctuary, also what's quite often referred to as the Ocean Dumping Act for disposal of dredge materials -- so EPA's involved with that in partnership with the Corps of Engineers and the states throughout the country -- the National Environmental Policy Act. This is a major act with the public, and all interested parties can provide input to major federal activities. Endangered Species Act -- and then just a couple more -- Oil Pollution Act -- EPA works in collaboration with the U.S. Coast Guard and other agencies involved with protection and response to oil spills.

And the last point I'd like to make is that, along with Dr. Richard Spinrad, who's Assistant

Administrator of NOAA's National Ocean Service, and nine other federal agencies, as I speak, this group under the National Oceanographic Partnership Program is now developing the Integrated Ocean Observing System. And as you may know, this is one of the major recommendations recently -- well, as of yesterday -- submitted to the President and the U.S. Congress as the development of this Integrated Ocean Observing System, which will be composed of nine to eleven regional associations throughout the country. Various funding mechanisms are now being made available to develop these regional associations. There's up to 16 pieces of legislation that may support this effort in the future.

So why bring this up? Why wear dual hats? Because I am on the executive committee overseeing the development of this Integrated Ocean Observing System. This will be going from white water to blue water, which includes the near shore brow and the green waters, and guess what, the marine managed areas and the marine protected areas. So at least speaking for myself and my agency, there should be a golden opportunity in the future for these marine protected areas and their associated monitoring programs to be

affiliated and closely connected with this U.S. Integrated Ocean Observing System.

Thank you.

CHAIRPERSON BROMLEY: Thanks, Brian, very much. It's lovely to have you with us.

Before I go on -- I might've done this -- but I want to thank Terry O'Halloran for not only this morning's thing, but Terry has worked closely with Lauren and others to arrange I think what will be one of our stellar meetings. Terry, thank you for what you've done so far and what you're going to do for us later.

(Applause.)

CHAIRPERSON BROMLEY: We have a review of the agenda. I'm going to ask Lauren to take the lead on that. We're going to hear an update from the MPA Center, which Charlie will give us. And then we'll ask Beth Burkhard for a brief introduction from the management service.

So, Lauren, do you want to walk us through the agenda?

MS. WENZEL: Yes. Mainly I just wanted to touch on a couple of logistical details as I walk through this. As you'll see, we're going to go

through committee business at eight o'clock. At nine o'clock, the subcommittees will meet and have an hour to just review their work and prepare for their presentations to the full committee. At 10:00, we'll be back in this room.

I just wanted to mention one item about the subcommittee meeting rooms. One of the subcommittees will meet in the back of this room, one will meet in the Molokini Room immediately out here, and one will meet across the hall on the Wailea Terrace. And anyone who has looked at these rooms knows that they're not created equal. The Wailea Terrace is really a beautiful room with a view of the ocean. So what we're going to be doing is rotating the subcommittees through so that everyone will get a chance to meet in that room. So for today --

CHAIRPERSON BROMLEY: And we're also going to monitor the output of that group that meets in that particular room. We have a natural experiment going on.

MS. WENZEL: That's right. So today Subcommittee 1 will meet on the Wailea Terrace. So we'll be looking to you for some really extra high quality output. Subcommittee 2 is going to meet in

the Molokini Room out here. Subcommittee 3 will meet in the back of this room. We'll let you know how we're probably going to rotate tomorrow and the next day.

So then at ten o'clock, we'll be back in this room to receive the subcommittee reports. Dan will go over the format for those reports. Then we'll have a working lunch, pick up our lunch and come back to continue going through those.

Then this after we'll have a panel presentation on culture and the sea. We'll take a break, and then we'll have the public comment period.

I just wanted to let you know that the committee dinner is going to be at 6:30, not at 6:00. It's in the Palm Court Restaurant in the hotel. Many folks got back to me letting me know that they wanted to come to dinner. We just had to make a reservation. But I didn't get -- didn't hear from everyone. So if you didn't get back to me, and you want to attend, just let Bunny know -- there's a sign-in sheet -- just so we can make sure that the hotel has the right number in terms of reservations for dinner. And it's going to be a buffet. They said with this many people, they would like for us to all do the buffet.

So that's the plan for dinner.

Then tomorrow -- I'll just go through the whole thing, and then if people have questions, they can ask. Tomorrow we'll again be meeting at eight o'clock. I think those of you noticed today we are not doing breakfast, at the committee's request. We decided to let you all do breakfast on your own. So we'll meet at 8:00, go straight into subcommittee meetings through the morning, have a working lunch. The Ad Hoc Cultural Work Group is going to be meeting during lunch so that they can have an opportunity to meet, because they draw members from the different subcommittees. So that'll be going on.

Then the full committee will hear from the subcommittees in the afternoon. And then we'll be hearing a panel presentation from the Fishery Management Councils later on in the afternoon.

Then on Thursday we will again meet at eight o'clock. We'll have a public comment period in the morning on Thursday morning, and then go into a panel presentation on Pacific Island MPA management. Then we'll have time for the subcommittees to meet. Then the full committee is to receive the subcommittee reports. That'll be really an opportunity to kind of

close out where we are for this meeting, and then plan our committee business and our follow-up for the next meeting, which will be in Washington, D.C. in February.

We do have a reception on Thursday evening. The National Marine Sanctuaries Office here on Maui is very kind in hosting a reception for us. So we're really excited about that. So we're going to adjourn at 5:00 so we can make sure to get over there in time for sunset. They're right on the water. It should be really nice.

They have asked us to car pool over there because parking is limited. So I'm going to put out a sign-up sheet for car-pooling over to the reception so that folks who rented cars can offer to take some folks who didn't rent cars. That would be really great.

As far as the field trip, I think everyone has received the information. The only thing I'll say about that is that if anyone has changed their plans for the field trip one way or the other, just let me know, and we'll take care of that. Bunny is going to be collecting money for gas for folks who are doing the add-on Jeep trips or raft trips. We'd like to get

that money collected tomorrow and the next day just so we don't have to scramble on the last day to get that from you.

So I think that's pretty much it for the committee and the agenda. Any questions?

(No responses.)

MS. WENZEL: Great. Thanks.

CHAIRPERSON BROMLEY: And we'll refresh your memory again perhaps on Thursday about the arrangements for Friday. So if you have any questions that come up, you'll have another chance to revisit that.

Charlie, would you like to give us an up- --

MS. WENZEL: Actually, I'm doing the first part, and then Charlie.

CHAIRPERSON BROMLEY: Oh, okay. Lauren, then Charlie. Go ahead.

MS. WENZEL: I'm giving this presentation -- can you guys hear me over there?

MALE SPEAKER: We can.

MS. WENZEL: Okay. As Dan mentioned, Joe couldn't be with us because he's been ill. So I'm filling in for him here. I'm Joe right now. I'm going to just give you a little update on what the MPA

Center has been doing, and then Charlie is going to give an update on the development of the national system.

I also wanted to mention that Ginger Hinchcliff also was unable to make this meeting and extended her apology. She's been working closely with Subcommittee 2, and was just piled up with a lot of other commitments and wasn't able to come. But she really wanted to be here, and extended her greetings.

Okay. So I just wanted to mention some of the things that have been going on at the MPA Center. We have a bunch of publications coming out, one on lessons learned that I think many of you have seen. Some of these I've sent out via e-mail.

A report on enforcement that is in draft and is undergoing internal review. Several folks have looked at it regarding how enforcement has been working for MPAs.

A publication on stakeholder participation synthesis and a decision support tool inventory.

We also are sort of building up our capacity at the center. We have a new cultural resources coordinator. I'd like to introduce Brian Jordan, marine archeologist with our office, who's going to be

working on cultural resources and helping us think through the inventory, the definition, the criteria and working with you on those types of topics.

A national system coordinator, Jonathan Kelsey, who's just joined us from the Coastal Programs Office within NOAA and has been working with Subcommittee 1.

We also are developing regional information centers online -- web-based centers -- to have increased access to information on MPA processes.

As far as planning, we're developing a strategic plan over the next eight years for the center. We're also working on a fiscal '05 work plan, and we've also been doing a lot of planning for the national system that you're going to hear more about in just a minute.

I just wanted to say a word about the budget. This year it looks like our budget is likely to be about three million. Last year it was close to five million. So, obviously, we're going to need to be tightening our belts a little bit, thinking strategically about what our critical priorities are going to be. In terms of the FAC, I think the bottom line is that it's just going to mean we're not going

to be able to fund some subcommittee travel this year. So we're going to ask you all to continue to work virtually this year.

Some key initiatives for 2005. I've been talking about the national system. We're really going to be focusing on planning, also on outreach and engagement, reaching out to critical groups that are going to be involved in helping us think through the goals and the components of the national system. We're going to be working on completing the federal and state portions of the inventory.

As far as stewardship, we're really going to be looking at increasing our focus on MPA effectiveness, developing some training in this area, based on some of the work that the ICN has done in terms of the book I think you all got, How is my MPA Doing? We're also going to be continuing support and training for stakeholder participation processes and developing a natural science strategy. Some of you I know attended the social science workshops. We're going to be doing a parallel track on natural science focus this year. And then coordination -- I mentioned these web-based regional information centers that we're developing.

So these are some of the -- we'll obviously be continuing a lot of the work that's been ongoing, but these are some of the key things that are on the horizon for the coming year.

I just also wanted to mention in terms of capacity at the MPA Center, we're going to be hiring a tribal coordinator to help us work with the tribes, an ecologist, social scientist, and someone to help us with our work on effectiveness.

FAC role in 2005. We talked about completing recommendations from the FAC by June 2005. That's going to be really important in terms of your contribution to the national system framework, which, as I said, Charlie's going to talk about in a minute. It would really help lay the foundation for that, and also, I think, really contribute to the public dialogue, so that when we go out and we engage with these different groups who are interested and engaged, to be able to let them know the thinking that you've done so far and how that has played in.

In addition, we're going to be asking for your help on helping us engage with stakeholders, identifying how to get access to some of the critical groups, identifying engagement opportunities. Are

there critical meetings or conferences or folks that we should try to reach at a particular time? And also inviting you to participate with us when we do go around and hold what we're thinking of calling public listening sessions around the country to talk to folks about how they think the national system should be structured and what goals it should focus on.

Finally, I just wanted to touch on a couple of FAC-related issues. We're currently in the process of renewing the charter for the FAC. This is an administrative detail, and the only thing that's important about it is that you all can't meet unless we have one. So we're working on getting that renewed. I know you all had suggested some editorial changes to the charter a while back. Those have been incorporated. It also addresses issues about membership. You all got an e-mail from me about that, trying to address the problem that we have right now about lack of staggered membership. We're going to be making some recommendations about terms, and also asking that all the members who wish to continue to serve will continue for another term.

And finally, just wanted to mention that we're going to be developing a new charge to the FAC.

You all have been asked to develop recommendations by June 2005. That's when the current term for most members expires. Then we'll be developing a new charge based on the next round of work that we would really like you to assist us with. That will really focus on the national system, but I'm sure on some additional issues, as well, such as effectiveness.

So does anybody have any questions? Yes?

DR. SUMAN: Where is the natural science workshop? Where will you begin, what regions?

MS. WENZEL: I'll let Charlie answer that. Sorry, Charlie. Did you hear the question?

DR. WAHLE: Yeah, sure. Do you want me to do that now or in my talk?

DR. SUMAN: Later, that's fine.

MS. WENZEL: Okay. Yeah, Tony?

DR. CHATWIN: Yeah. Thanks, Lauren. I just had a question regarding the public listening sessions. You said the objective was to hear the public's input on goals and objectives of the national system. Has there been more thought given to that? A little more detail there? Because it seems like the executive order sort of establishes goals.

MS. WENZEL: Well, --

DR. CHATWIN: Is it going to be getting comment on what the executive order says?

MS. WENZEL: The executive order lays out some very broad themes. Obviously, Subcommittee 1 has done a lot of work in terms of the vision and goals of the national system. We'll be looking at both of those things and laying those out and asking for additional feedback from the public based on those. But we don't have agendas developed for those. We're thinking about those for next spring.

DR. CHATWIN: Okay. And the only reason I ask this is because I was involved in some public meetings about MPAs in New England where NOAA came to ask precisely that question. They weren't that successful because it wasn't very well structured. So it's good to have specific things you're asking the public's comments on.

MS. WENZEL: Yes. Thank you.

Yes, Terry?

MR. O'HALLORAN: And Charlie may have this in his presentation, but an update on the social science workshop process?

MS. WENZEL: Okay. Well, I'll ask Charlie to touch on that when he's --

MR. O'HALLORAN: Okay.

MS. WENZEL: -- up here.

Yeah, John?

DR. OGDEN: Lauren, my reading of the Commission on Ocean Policy Report, which was just released yesterday, is that ecosystem management's going to be a sort of a central framework of the development of whatever policy comes out of this over the next time. Is there a -- is there going to be a -- I -- I want to say "reconciliation" -- and I don't mean that in a negative way -- but a kind of a merging of the goals of the MPA FAC and so on through you guys with that effort, particularly with regards to ecosystem management?

MS. WENZEL: Yeah. I can say a couple words. I don't know if Mary would like to also. NOAA has an Ecosystem Goal Team. They have teams -- matrix teams organized around the cross-cutting goals of the agency, one of which is ecosystems. They're really going to be the lead on helping to implement those recommendations once the response -- once the administration response has been determined. So the MPA Center and protected areas in general is one of the participants on that team, and we'll be working

through them.

MS. GLACKIN: I guess my only comment is -- and NOAA very much welcomes the recognition and supports the recognition of the Ocean Policy Commission. We have embarked with our partners at all levels to, first of all, begin to define what regional areas will be. So there was a workshop that we hosted in Charleston to begin to look at that kind of thing.

I think it's -- I don't actually envision a melding of these goals and objectives, I mean, or trying to make them come in common. We very much view that the goals and objectives of these regional areas need to be defined by the participants within those areas. They need to set their own agendas there. And I would expect that MPAs would be something they would look to to help them meet those goals and objectives.

So I don't know whether that's helpful or not.

MS. WENZEL: I'm happy to call on Gil. I just didn't want to use up more than my allotted time, Mr. Chair.

CHAIRPERSON BROMLEY: No, you can go ahead.

MS. WENZEL: Yes, Gil?

MR. RADONSKI: You mentioned that there's

going to -- you have a smaller budget for next year, and you've added a lot of people. How do you make that work?

MS. WENZEL: Well, one of the ways in which we make that work is that a lot of our staff are contractual, and we have had some contracts with companies that we've been able to front-load from some of the funding that we had last year to fund those folks.

MR. RADONSKI: Okay.

MS. WENZEL: Brian, did you --

DR. MELZIAN: Just regarding ecosystem management or watershed approach -- EPA has been undertaking this in partnership with NOAA to some extent -- regional assessments, including the Component Environment Monitoring and Assessment Program, which actually has used previously biogeographic provinces. For example, this is the Pacific Biogeographic Province, and on the East Coast you have the Virginian Province, which goes from Cape Cod to the mouth of Chesapeake Bay, the Louisiana Province in the Gulf of Mexico, et cetera. So during the development of these regional ocean commissions or organizations, as proposed by the commission report,

and the regional associations that will develop the Integrated Ocean Observing System, we do not believe -- "we" meaning collaboratively -- that these borders will be based on any political boundaries. They'll be based on ecological boundaries and oceanographic boundaries.

MS. WENZEL: Okay. I'll turn it over to Charlie now. Thank you.

DR. WAHLE: Thank you, Lauren. Thank you all for being here.

This morning I want to give you a relatively brief overview of our thinking on the national system, and highlighting in particular where the activities of the advisory committee plug into that process, where you have already, and where you will in the future. Before I get started, though, I want to extend my sincere gratitude to Subcommittee 1, which is the group I've worked with most closely in developing some of the -- what are truly the core and fundamental ideas of the national system. It's made a huge difference in our thinking, and also in our time line. As you all have probably seen and probably knew before you got engaged in this, sometimes things like this in the government can take a long time. It helps

to have people on the outside who are a little more impatient and a little more free to think quickly. It's moved us along quite a bit.

So let's get started. The executive order says a lot of things. But essentially you can boil it down to a statement saying MPAs could be and usually are useful tools for conservation and management, and we should use them more effectively. It tells us to do things like communicate to the public and stakeholders about MPAs and to provide technical assistance. And it also tells us to do what we are thinking is one of the fundamental functions of our group, which is to develop or design an effective and comprehensive national system of MPAs. That's where we've been headed.

Now, one might ask, why would you do this? Some of us ask this question quite often, actually. There are a number of reasons. But some of the more compelling ones are that there are literally hundreds of MPA authorities in this country at various levels -- federal, state, tribal, et cetera. Those authorities are all kind of similar, but quite different in many ways. Very confusing. So there's a patchwork of legal authorities.

As a result, there is a dizzying array of MPA types and purposes and names and what have you that are a constant source of confusion and frustration for everyone. Probably most importantly in terms of what's happening on the ground, there has been historically a lack of comprehensive planning to meet regional and national goals at MPAs. Most of the MPAs that we're aware of were established for largely local purposes, relatively independently of those around them, or of the underlying resource management framework. As a result of that, there's a lack generally of ecological connectivity, or at least of a priori design connectivity among existing MPAs. There are thousands of sites in the water right now -- federal, state, commonwealth, territorial and tribal -- all meeting these other characteristics.

Finally, and potentially most importantly, there is no existing mechanism to make that whole system, if you will, work better. There are no existing coordination mechanisms. There's no expectation for it. Therefore, it's largely lacking.

So this is kind of a mess. That's why the executive order was written was to make some sense out of it and to use the tool more effectively.

This is kind of the way we picture the current situation. These puzzle pieces are where you all live. The essential picture that we see is a dining room table covered with puzzle pieces, some upside-down, some right-side-up, from maybe somewhere between five to a hundred different boxes. Our job is to try to make that into a picture that actually works.

So what would that be? What is this national system thing? Fundamentally it's -- it's -- and this is an idea that would be good if we're all comfortable with it, if we just keep it as our mantra -- it's an evolving -- and that's important -- portfolio of existing, enhanced and new MPA sites and networks as needed. So it's a continually changing suite of sites that are built on the best available science, that represent diverse ecosystems in all of our marine and marine-like environments, that protect the nation's natural and cultural heritage, and ensure sustainable production of renewable marine resources, specifically fisheries, that include federal, state, commonwealth, territorial and tribal sites or areas, and finally, and equally importantly, that are based on continual and meaningful input from agencies and users and

stakeholders to design and manage these areas.

I think many of you understand, probably better than we, that this is not the current situation largely.

So what would that look like? The first step is just to knit together the pieces of the puzzle so you have a comprehensive framework to build from. Then to look at existing sites and to consider modifying or improving the effectiveness of existing sites. Those are the little purple boxes that say "enhanced." And finally, to consider the addition of new sites where needed to fill gaps in the current level of protection. And in some places there may be merit in looking for ecologically connected networks, which are these little dotted lines. In case some of you can't see it in the back, this one -- larvae from this area feed these two, and animals migrate back and forth -- those are scientifically challenging, but probably very useful in terms of both conservation and management.

So the over-arching target that we're all pointing toward looks something like this. Now, where those are, and how big they are, and what kind they are, and when they get established is where the rubber

hits the road. And that's the work that we'll be doing together.

So this -- let me back up -- that's a huge endeavor. This is not a trivial thing. It's also not a new thing. It seems like a big deal, and we all think, oh, my God, what have we done? But, you know, other countries have been doing this for decades. But typically they're a lot smaller than we are. So we have a scaling issue as well as a complexity issue of all the different political layers.

So it brings you back to, why would you do this? And some of the benefits of a comprehensive national system are, one, that it can be explained and assessed and even evaluated using common terminology and language, which we've developed in the classification system. It provides -- ultimately will provide more comprehensive conservation of nationally significant natural and cultural resources. It's built on common criteria for designing and evaluating MPAs.

You'll recognize in this list these are the rallying cries of virtually every MPA policy statement that's ever been made in the past decade from all sectors -- pro, con and in the middle. These are the

things that people said we really need to do. It would include some scientifically based networks designed for connectivity, and it will allow, or at least facilitate, enhanced planning at the local, regional, national level to identify what conservation priorities are, rather than an ad hoc approach. It will improve coordination among government agencies that manage MPAs, which is a good thing. And it will provide for, and really only succeed if, we have sustained stakeholder engagement and support for the MPAs.

So these are kind of the underlying reasons why this is worth doing. That's a question worth asking because this is an awful lot of work.

So how do we get there? Basically, what I want to give you here is an overview, and then go through some detail about what the steps are.

We see this as a sequence of relatively discrete phases, although some will persist longer than others. At each phase there are discrete products and results that come out, as well as generally clear areas where the advisory committee's recommendations will plug in and influence the outcome.

This is a multi-year effort. We don't know yet how many years, but it's probably at least four to six from now.

One important thing to consider here -- and this gets to, Dan, the earlier questions – is about the role of science and stakeholder involvement -- what we envision is a continuous process of developing the science, synthesizing the science, and plugging it into the identification of priorities, and along the way getting input from stakeholders and agencies and programs, as well.

So the steps just briefly -- and I'll go into more detail in a minute -- the steps are, phase one, collect the baseline information. That's essentially a very generic box for everything we've done in the past three-some-odd years.

Phase two, which is coming up, is the development of the framework document. That's where we say what we're really all about. And that's where the work that you all have done, especially in Subcommittee 1, will be critically important to defining what that really is.

Step three is taking that framework and developing the list of MPAs and the nucleus of the

national system.

And step four, which is really in some ways both the more challenging and the more interesting, in a way, is to identify at a regional scale priorities for MPA potential needs on three tracks -- natural heritage, cultural heritage and sustainable production.

Phase five is to integrate all those into a comprehensive national plan, and phase six, for those of us who are still working on this at that point, will be to implement or have, we hope, the actual existing authorities and agencies implement that plan.

So I'm going to briefly summarize some of the highlights of those steps to sort of walk you through from phase one to phase six. Some things that we're doing all along that will inform and support all of those phases include gathering and communicating information, developing some science, and working to get stakeholder input. Some major things that we've done along those lines, Lauren has touched on these, and we've reported on them in other venues, as well, are the websites, our upcoming regional information centers, which are modeled on the "pacificmpa.org" one that we did several years ago in California, the MPA

Connections newsletter, which kind of gets the word out about MPAs and tries to dispel some of the myths, our ongoing education efforts, and then, finally, the "Understanding MPAs" course which the training and technical assistance folks in Charleston have developed, which is a kind of movable feast of an objective view on MPAs.

On the science side, we are developing national and regional strategies for both natural science and social science that will identify some of the key science issues that need to be addressed in order to do all this other stuff more effectively.

Then finally, we're beginning to look more closely at what we believe is one of the key science issues in MPAs, which is, then what? Okay, you've established it. What happens? That gets at how you set your goals, what your expectations are, how you evaluate performance. And without that, we're sort of shooting in the dark.

Then finally, we've developed a whole series of mechanisms to get stakeholder input from your group, the Federal Advisory Group, a state advisory group, which is not a formalized thing, but it's a group of folks from coastal states who help us develop

the inventory and other MPA initiatives, the Federal Interagency Working Group, and then finally, a series of public listening sessions that we hope to hold in the near future. So that's sort of the underlying matrix that will allow the rest of this stuff to happen.

In phase one, which is the collecting of baseline information, we are busily working on the MMA inventory, which you all know about, the MMA criteria, which is the definition of "marine managed areas," is in its final throes of internal review, and we expect it to be out this fall. We are developing an inventory of what are commonly called "de facto MPA sites," which are areas that are closed in one way or another for purposes other than conservation, but which may still affect uses, and in particular, fishing. That information will be coupled with the MPA information to have a clearer idea of what the ocean really looks like to the user. And then, finally, the classification system, which gives us this common language.

At the same time, we've been assessing the needs, trying to figure out what really needs to be done. The first step was the needs assessment, which

you've all seen, that identified priorities primarily from the managers' points of view. We're working on an enforcement assessment, which will look at the capacity and the needs and the potential opportunities for improving enforcement, which all of you know is a critical piece in this whole picture.

We've just published the "Lessons Learned Report," which looks at what worked well and what didn't work so well in five or six recent MPA planning processes, and hoping to glean from that some lessons that we can apply in the future so we don't keep reinventing these same problems. We're beginning to scope out a legal assessment to look at, what is the legal and policy framework for all this stuff? And then, finally, the science strategies -- and I'll talk about the nitty gritty on that at the end.

Phase two, this is where -- kind of where we are right now. We're, in effect, at the beginning of phase two. I like to think of this as a sort of funny log scale, where the first phase is four years, this is maybe one to two years, and then it starts getting longer again. But this framework thing is basically the statement of, what is this national system all about? It will be a relatively short document, we

think. In it we will lay out, with your help and guidance, the components of the national system and the framework, including, what are its goals and objectives? How might it be governed or coordinated? What are the processes that we envision using to identify priorities? And then what is the role of science and other technical information in identifying those gaps? It will also spell out -- and this is really important -- both the classification system information, which we've already seen, and draft criteria for the definition of a marine protected area as opposed to a marine managed area.

So this is where we finally say, what is this thing we call MPA, and how do we intend to use it? So it's really important.

Your role in that is key. Subcommittee 1 has been blazing along on this under the guidance of Mark Hixon to help us figure out what those goals might be and to figure out some of the key parameters of what fits inside the box we call "marine protected areas." We expect to get other input from the agencies, and certainly from the stakeholders and users. We are looking very closely at international examples of national systems to see what worked well there in

those contexts.

Phase three is, once we've done this framework, and we've said what it's all about, and what MPAs are, then it -- that's sort of a phase shift, if you will. What that does is it triggers what the executive order calls "the list." And the list of MPAs is when we say, these are the entities that are already in the water that we believe meet the criteria for a marine protected area.

And that sounds trivial, and sometimes it feels like it to me after all these years. But basically what happens then, once we do that, is two things -- two really important things. One, the list becomes the nucleus for the national system. That's what we build from. And the other is that those are the MPAs which the executive order directs the federal government to avoid harming through its actions or permitted actions or what have you.

That has some pretty significant inherent policy implications that will make the formation of this list a real challenge. But it's something that we're required to do, and we're hoping to get some serious input from you all on how to do that.

The way that this list will be formed is that

we have this inventory by then completed of the marine managed areas of the country. So in there are all kinds of cats and dogs, you can imagine -- basically any kind of area-based management is being thrown in there, and then we'll filter it out. And so the formation of that filter is critically important for the development of the list. The work that Subcommittee 1 has done has helped us a lot in figuring out what that filter should look like and what the pore size ought to be, essentially.

So what we will do at that stage is, the minute we finalize the framework, that also makes the filter. Then it's a matter of pushing the button on the inventory, and some stuff squeezes through, that's the list. So your input on that is crucial.

Phase four is the fun part. That's where we look regionally at what, given all these tools now that we have, and having actually finally said what we're all about, we go to regions and say, well where, what are, if any, the gaps and the needs for applying MPAs to meet three relatively distinct purposes, the conservation of natural heritage, cultural heritage and sustainable production? And in there, there's a heavy science component, of course, of documenting

where the resources are, looking for threats to those resources, looking at gaps and levels of protection, and then ultimately identifying some priority areas that are worth thinking about as potential MPA areas. It's also where we will most critically need input from stakeholders and agencies about what those priorities ought to be. And at that point, we will be again asking you to help us do that.

Finally -- not finally, but almost finally -- is the phase where we knit all that stuff together. This is where we say, okay, we now have regional priorities for these three general MPA purposes, and we want to knit those together into the puzzle that actually looks like something. It doesn't look like flowers and dragons and all kinds of other stuff; it's a single picture. That's going to be very challenging, as well, but also very interesting, because that's where we try to optimize the development of MPAs that meet multiple objectives, which you all know is probably the way we will all get some things done in the future is setting up MPAs that both conserve important biodiversity areas, and enhance fisheries, and protect cultural resources.

So the way we envision doing that is that's

going to require some new kind of science. We really don't have, in many people's minds, the science foundation to answer those questions. How do you optimize these things? So we've started about a year ago working with the Fisheries Council and the National Marine Fisheries Service to develop that science. That will then form this integration phase.

Then finally, we will be looking to the existing MPA programs to choose how and when and where and if to implement this plan. While that's being done, our role will be primarily looking at measuring effectiveness or developing ways to measure effectiveness, monitoring the impacts of the national system, and finally, providing some mechanism to coordinate and govern, if you will, all of these integrated sites.

So that is our -- so here is our view of the national system, science-based, and effectively conserving the key resources of the nation. We envision, in fact, having a number of key roles. The first, of course, in time at least, and maybe in significance in the near future, is to help us develop this framework, which we're shooting for about a year from now. It's the draft. That, again, has been so

far the work of Subcommittee 1.

Along the way, we'll need to look to you for access to and conduits to your respective stakeholder groups so that we can get that kind of input early on and throughout, and to help us identify national and regional priorities for the system, and then advise on how and where to do the steps as we move through the system.

So that's the overview. I'd be happy to answer questions. Yeah?

CHAIRPERSON BROMLEY: I'm sorry. In view of the time, Charlie, may I -- I -- we do have to move on.

DR. WAHLE: Okay.

CHAIRPERSON BROMLEY: So if there are questions of Charlie and of this presentation, I'd like to ask you to sort of do it in other venues. We'll be here for three days. I think we've got some other stuff we've got to do. So I'm going to pull the plug on questions, Charlie. I'm sorry.

DR. WAHLE: No problem.

CHAIRPERSON BROMLEY: Beth, could you give us an update, please, on Mineral Management Service?

MS. BURKHARD: Certainly. I have been

talking with the management chain quite extensively on the question of whether MMS -- Minerals Management Service -- would be submitting any sites to the MMA inventory. I'm happy to say that the answer is yes. We have started out with a selection of about 15 to 17 obvious sites in the Gulf of Mexico that we'll be using as our pilot to figure out how the process of data collection goes. After that is completed, we will go on and look at the rest of the potential sites that we have and be putting them into the inventory as time permits.

The other thing that I can say is Subcommittee 1 had asked a question about whether or not any of our lease blocks or planning areas would be submitted to the inventory, and the current answer -- now, granted, this hasn't gone all the way up to the top of the chain -- but every level so far has come back with, no, the planning areas and lease blocks would not be submitted as MMA sites because they are strictly administrative boundaries. They have no bearing on what's in them, really. It's just sort of a way for us to figure out what areas we're going to be addressing next. So they don't have conservation issues and wouldn't be relevant to the criteria.

That's pretty much it.

CHAIRPERSON BROMLEY: Thanks, Beth, very much.

Okay. It's past 9:00. The program calls at nine o'clock for us to go to our three subcommittees. I'm going to call your attention to the fact that your packet does contain the output of the three subcommittees on the right-hand panel, I believe it is. I'd like to say just a few words about this. At ten o'clock we're coming back in here for plenary, and then we will hear from each of the three subcommittees.

We had an executive committee conference call two or three weeks ago and agreed on this protocol. Each subcommittee will have about ten minutes to make their recommendations to us, to tell us what they're thinking about. We'll have a 40-minute time slot for discussion and back-and-forth. What we would ask is that this feedback to the subcommittees be substantive in nature, that it seek clarification, that it be focused on substantive things, and the wordsmithing is not going to be something we wish to get into at this time. If you have specific linguistic and conceptual concerns about what the subcommittees have done, we

would like that to be conveyed to them in writing, that you would hand it to them, or that you somehow convey that to the chair of the subcommittee so that our time in here, the 40 minutes that we each will have, is focused on substantive issues that the subcommittee presents to us. So that would be the thing at ten o'clock.

Let me say that I've gone back to look at Joe's original -- as he put it, his straw man charge to the subcommittees in November when we met in San Mateo. The executive committee reworked those bullets that Joe had done, put them in kind of a different format. I have pulled that out my file. I will -- at the one o'clock time when the subcommittees get together, I'm going to come around and visit with each of you and refresh your memory as to what it is I think we had charged each of the three subcommittees to do to make sure that the good work that you've done so far that you haven't overlooked some things that are essential. So that's just sort of a heads-up of what will happen at one o'clock.

Let me say that by our February meeting -- and those of you who are the chairs of the subcommittees will know what I'm talking about -- in a

phone call we talked about category A things and category B things -- by our February meeting, the subcommittees must have completed all of their recommendations that they wish the full advisory committee to act upon so that, in a sense, when we meet in February, there will be -- by the time we finish, there will be no unleft (sic) things to address. You will have completed your list of recommendations and things by the end of our February meeting so that the full committee will have a chance to consider it then. And then we will meet in June, and in a sense, we will sort of have a second reading of it. So that there will be no surprises at the June meeting, everything that needs to be formalized at the June meeting will be very clear to us by the end of the February meeting. So that's just a reminder of the schedule. The clock is ticking, and we must have that wrapped up.

So hearing -- are there --

DR. CHATWIN: Dan, not to take much time up now, but I think that Charlie's presentation was really, really important, and warrants some time allocated --

CHAIRPERSON BROMLEY: Charlie's pre- --

DR. CHATWIN: Yeah.

CHAIRPERSON BROMLEY: Yeah, of course.

DR. CHATWIN: -- for -- for discussion. So I think it might be useful if we could identify in the schedule where we could set aside some time, or add to the agenda a half an hour at the end of the day to have a chat about that.

CHAIRPERSON BROMLEY: No, that's good. Yeah. And I'm sorry that we're sort of pressed for time now. But that's right. We'll get back -- Mark.

DR. HIXON: Dan, I believe it's going to take longer than ten minutes to make a presentation of the documents. So I just wanted to throw that out. I'd have to speed-read it just to get it out in ten minutes.

CHAIRPERSON BROMLEY: Well, what did we talk about in our phone conversation?

DR. HIXON: We talked about --

CHAIRPERSON BROMLEY: Ten minutes.

DR. HIXON: I don't believe so. Maybe we did.

CHAIRPERSON BROMLEY: Do you remember me asking you not to read the recommendations? Do you remember me saying that I assumed all of us could read

that and --

DR. HIXON: Also, I recall --

CHAIRPERSON BROMLEY: Sorry. I'm being the nasty chair now.

DR. HIXON: Yeah. Well, no offense taken. I understood that the subcommittees were going to be presenting their documents sort of as a group.

CHAIRPERSON BROMLEY: Yeah.

DR. HIXON: So it's going to be, you know, somebody stepping up, presenting a piece, somebody else stepping up, presenting a piece. I'm just -- it's going to be a little longer than ten minutes is all I can say. I just want to warn you.

CHAIRPERSON BROMLEY: Okay.

MR. ZALES: Just real quickly to what Mark's saying -- and in the phone conversation, I think we were -- because I know I brought this up, and I think some others agreed with me -- that a lot of times -- and even though all of us hopefully have read this, when it's read to you, what you read and what's read to you sometimes are different. That's the advantage, I think, of having it read, so that it gets a more clear picture to the group as to what was going on.

CHAIRPERSON BROMLEY: Yeah. Okay. That's

fine. You have -- each subcommittee has 50 minutes. To a certain extent, you can allocate that as you see fit. But I also feel constrained to make sure that all of the members of the FAC have a good chance to push back on you on different things. So I will -- I'll relent, and you'll have more than ten, but I wouldn't count on a lot more. So again I point all of us to the written material that we have in our packet, urge us to do something that we do every day, which is to read it. But I do grant that hearing it sometimes is important. So how's that?

So we're already short of time. So the subcommittees, you have about 40 minutes. We don't have any organized break, so get your coffee or tea or water or whatever you need to do at your own discretion. We'll be back here at ten o'clock.

(Subcommittees meet from 9:15 a.m., until 10:06 a.m.)

CHAIRPERSON BROMLEY: Okay. Are we ready to reconvene? We're not, but I'll pretend we are.

(Pause.)

Okay. I think we better get started. The agenda has that at ten o'clock we would discuss the process for receiving provisional reports by the

subcommittees. I sort of snuck that in earlier and was overruled and rebuffed. So we can make up a few minutes by just skipping it all. I think each subcommittee has a pretty clear idea of what we expect of them. You will have 50 minutes, and allocate it, to some extent, as you wish.

So, Mark, if you're ready to go, let's hear from group one.

DR. HIXON: Thank you, Mr. Chairman. I would ask all members of the FAC to remove the -- and examine -- the handout in their packet that is the document we'll be discussing. The first page is this, it's a note to the full FAC dated 1 September, and it's followed by the documents we're about to present. It'll be much easier following along. We are going to be skipping around in this document by necessity. So I'll be as explicit as possible as we guide ourselves through this.

This document, which we made available on the secure web page a couple weeks ago now, is the result of a tremendous amount of work by my subcommittee. I want to thank my subcommittee for the amount of work they've put into this document, and especially their amazing ability to listen to each other and come to a

consensus, find the common ground. It's been really, truly a pleasure working with this group.

We have a fairly -- we have a diverse group of what, for lack of a better term, I'll call stakeholders in our group, representing virtually all the major stakeholder groups. But there's some very important absences of expertise within our group, which is why our document's not quite complete. First, we did not have expertise in social science, and the gaps in our document reflect that. We also do not have tribal or indigenous representation on our subcommittee, so we've left gaps in our document there. We didn't want to pretend to have expertise where we did not have it.

So what we have provided for the committee we see as sort of a constitutional statement for a national system of marine protected areas. These are -- this is the vision and goals statement, which not only provides vision and goals, it also provides descriptions of the components of a national system, as well as how new MPAs might be added to this system.

Very importantly, this document has a detailed glossary, which we see as being absolutely essential. Because of all the jargon involved with

MPAs, that when someone uses a particular term, two different people will often have two different concepts in their minds. We're trying to find the common ground as much as possible by including the glossary. We're not going to spend a lot of time going over the glossary, simply because we don't have the time. But we see it as an extremely important part of this document, and we will emphasize some parts of the glossary.

Throughout the main document there are these key terms and words that are underlined. These are those that are defined explicitly within the glossary.

A very important part of the glossary is our definition of an MPA, of a marine protected area. And that definition, I want to remind the full committee, will eventually become the filter that the federal government uses to take the inventory of MMAs, marine managed areas, and produce what is an inventory of existing MPAs for the United States. Because this is an important definition, I ask you to immediately skip down to page 3 of the document, about halfway down, beginning on line 111 -- or not line 111 -- I'm sorry -- page 2,

MR. ZALES: Seventy-three, Mark.

DR. HIXON: Line 73 on page 2. The co-chair, Bob Zales will now present the definition of "MPA" for us.

MR. ZALES: Okay. Our definition of "marine protected area":

> "A 'marine protected area' is any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws, or regulations to provide lasting protection for part or all of the natural and cultural resources therein."
>
> This is according to the executive order.
>
> "In the context of this general definition, the meaning of each underlying key word follows:
>
> "area = Marine site or region that has legally defined geographic boundaries. The site or region shall not include the entire US EEZ or an entire state's waters.
>
> "marine = Ocean waters and seafloors, including intertidal

areas (to extreme high tide level) and estuaries (extending upstream to .5 ppt salinity), and the Great Lakes.

"reserved = Legally established by federal, state, territorial, tribal, or local governmental authority."

"Lasting" I'll do last.

"protection = Specifically established with the goal of providing an enhanced level of conservation for part or all of the natural and cultural resources therein. Restrictions may range from managed use to no access.

"cultural resources = Submerged physical features of historical or traditional significance, such as archeological sites, artifacts and shipwrecks."

We're still waiting on the Subcommittee on Cultural Resources to provide a more refined definition.

If you would, skip over to page 7, and you'll see the definitions of "lasting" protection for marine protected areas. That first paragraph I'm not going to read. It's self-explanatory. Under the category of "MPA Category & Sub-Category" you see "Natural Heritage MPA, Living Natural Resources, species, populations, ecological communities and/or ecosystems, including habitats and ecological processes. The minimum duration of protection recommended is ten years. The rationale for the minimum duration of protection is:

> "Procedural: time required for public notification (maps), at least five years of scientific monitoring and analysis, followed by independent scientific review and stakeholder involvement in adaptive management framework."

You'll see notes here for the little glossary that comes after this. I'll read some of them when I get through here.

> "Scientific: response rates of species, populations, ecological communities and/or ecosystems and

their associated features determined by generation time of focal or index species.

"Large-scale non-living natural resources, larger geographical features that are well-documented and permanent from the human perspective, some examples being submarine canyons, volcanic features, seamounts and pinnacles."

Minimum duration of protection is indefinite.

"Representative, unique, rare or uncommon seafloor features are irreplaceable and sufficiently valued to be preserved for present and future generations of Americans."

"Small-scale non-living natural resources, smaller geophysical features that may be poorly documented and/or ephemeral from the human perspective, some examples being hydrothermal vents, methane seeps, submarine freshwater

springs, and sand 'waterfalls'."

Duration recommended is ten years, and the procedural is:

"Time required for public notification (maps), scientific monitoring of persistent or geophysical features, and stakeholder involvement in adaptive management periodic review.

"Scientific: poorly documented features may be more common than previously assumed and/or features may be ephemeral, both cases justifying occasional adaptive management review."

On page 8, it continues under the "Category and Sub-Category":

"Cultural heritage MPAs: the definitions and classifications will be provided by the MPA-FAC Subcommittee on Cultural Resources working with Subcommittee 1.

"Archeological resources (non-tribal and non-indigenous) (non-

tribal and non-indigenous artifacts, shipwrecks, and other archeological sites, including human remains)."

Minimal duration of protection is indefinite.

"Some archeological features may degrade over time, requiring periodic survey and assessment followed by adaptive management, yet the intent is that these features are irreplaceable and sufficiently valued to be preserved for present and future generations of Americans."

The category for tribal and indigenous cultural resources, we've deferred that to the other subcommittees for their definition.

"Sustainable production MPAs: There are multiple possible subcategories, all of which are designed to protect focal (or target) species, and may protect supporting ecological communities and ecosystems, including habitats

and ecological processes."

The duration of protection is ten years.

"Procedural: time required for public notification (maps), at least five years of scientific monitoring and analysis, followed by independent scientific review and stakeholder involvement in adaptive management framework.

"Ecological: response rates of species, populations, ecological communities and/or ecosystems and their associated features determined by generation time of focal or index species. Also, large-scale oceanographic cycles (El Niño-Southern Oscillation and Pacific Decadal Oscillation) occur on decadal time scales."

Some of the footnotes I'm not going to read. I'm going to read three, four, six and seven because stakeholders, number five, will be defined by the other subcommittee. The first two are kind of self-explanatory. And number eight is kind of a moot point

as of today because we got an answer from MMS for the question that we had asked.

> "3. The 'duration of protection" is defined as the time period an MPA (or MMA) has been designated to exist, regardless of how long that MPA (or MMA) has actually existed. For example, a three-year-old MPA designed to exist for 25 years is considered to have a 25-year duration of protection. The specified minimum durations of protection are also based on the following general considerations:
>
> "Any MPA may have an indefinite duration, as specified by legal authority;
>
> "MPAs with only seasonal protection must provide that protection at a fixed and regular period each year that corresponds to the timing of a predictable ecological process or anthropogenic threat (otherwise the absence or

removal of such explicit periodic protection means that the site is no longer an MPA, but an MMA);

"Management of all MPAs must include the plans, capacity, and resources to conduct regular and meaningful monitoring and analysis to assess and evaluate performance; and

"The specified minimum durations of protection incorporate the times estimated to be required for the MPA to become fully functional after establishment, some effect of the protection to occur, especially in the case of MPAs, that protect living resources, a statistically valid trend in performance to be monitored and assessed, the appropriate adaptive management response to be taken based on the results of monitoring and analysis (which may include alterations or de-designation of the MPA).

"An 'indefinite' maximum duration of protection means that the initial intent at the time of MPA designation is permanent protection. The distinction between 'indefinite' and 'permanent' acknowledges that MPA designation and level of protection may change because natural disasters beyond human control may destroy or alter resources, or societal values may change.

"6. At least one full generation, at a bare minimum, is necessary to determine the trajectory of protected biological populations inside an MPA or regional populations ecologically linked to that MPA.

"7. Non-living natural resources that are protected principally to conserve their associated marine life are, by definition, subsumed within the subcategory of living

natural resources (as the habitat for those living resources).

Thank you.

DR. HIXON: Thank you, Bob.

Now that we've gone through the definition of "MPA," if you'll please go to the first page of the vision and goals statement, myself and other members will now read the actual constitutional statement, if you will, starting with the vision statement.

"The vision is to have an effective and comprehensive national system of marine protected areas and MPA networks that:

"[first] meets multiple conservation and management objectives for marine resources by implementing three broad categories of MPA: natural heritage MPAs, cultural heritage MPAs, and sustainable production MPAs;

"[second] is based on input from stakeholders and the best available science; and

"[third] is integrated within and

as part of the existing ocean management framework of the United States ([that is] federal, state, territorial, tribal or local laws and regulations)."

Max Peterson will read the next paragraph on goals.

MR. PETERSON: "The goals of the national MPA system will include, but not be limited to: conserving marine biodiversity and representative examples of the nation's major marine ecosystems and habitats; promoting ecologically and economically sustainable use of marine resources; enhancing the conservation, use and enjoyment of the nation's natural and cultural and marine heritage; and [finally] raising awareness and knowledge of marine and coastal regions."

Let me point out that each one of the underlined words there has a definition in the

glossary that we'll refer you to, and we'd be glad to have comments either verbally or in writing. Thank you.

CHAIRPERSON BROMLEY: George Lapointe will read the "components" section.

MR. LAPOINTE: Thank you, Mark. This section reads:

> "The components of the national system may include, but are not limited to, MPAs: representing different marine ecosystem and habitat types; managed to conserve species at risk, threatened, or endangered and their critical habitats; species for which concern exists about their status, but for which there are insufficient data regarding their populations and habitats; ecologically important species, processes and habitats; species incidentally taken as by-catch by commercial and/or recreational fisheries; commercially and/or recreationally

important marine resources; unique biophysical or geological features; or cultural resources.

"[Also MPAs] managed to provide opportunities for scientific research or education;

"[MPAs] protecting areas vital to the conservation of a particular species, such as spawning and nursery grounds or unique habitats; or

"[MPAs] forming networks designed to enhance the conservation of species whose local populations are linked by dispersal or other movement."

DR. HIXON: Thank you, George.

The final section will be read by Steve Murray. Steve.

DR. MURRAY: Thank you, Mark.

"New MPAs added to the national system will be justified on the basis of adequate information regarding need, design and

implementation, including the following factors: rigorous scientific assessment of the proposal; broad and representative stakeholder input; evaluation of social and economic costs and benefits; estimated costs of effective implementation, monitoring and enforcement; evaluation of national security issues; review of alternative means of achieving MPA goals; clearly articulated goals and measurable objectives; and scientifically rigorous monitoring and evaluation to allow for subsequent adjustment of MPAs and MPA networks in an adaptive management framework.

"MPAs designated principally to conserve living marine resources will be designated (sic) to consider (1) processes important to ecosystem structure and functioning, and (2) linkages

between MPAs and the broader environment."

Again, those terms that are underlined are defined in the glossary.

DR. HIXON: Thank you, Steve.

In closing, I'd like to emphasize that, although we've put a lot of work into this document, we do see it as being a draft. We do want feedback and comments from all members. We're willing to accept that feedback verbally during this plenary session, during the breakout sessions, in writing, e-mail -- however you want to give it to us, we'll take it, and incorporate your comments or let you know why we didn't.

Thank you, Mr. Chairman.

CHAIRPERSON BROMLEY: Sterling. Wonderful. Nice show. Thank you.

All right. We're ready for comments.

MR. BENTON: Mr. Chairman, just a question for you, really. To me, I think this is a good work product, but there's a lot of questions of interpretation and meaning in these words --

CHAIRPERSON BROMLEY: Right.

MR. BENTON: -- that it would be very

helpful, at least for myself, at some point to have a dialogue around this table about -- I'm just wondering what your intention is in terms of how to foster that and when we do it. Right now I understand we probably don't have the time. But I'm wondering about sort of procedurally how you want to go.

CHAIRPERSON BROMLEY: Let me try to answer that, and then I'll turn to Tony. My thought would be that, to the extent you -- in their glossary, to the extent you find trouble with their glossary and its characterization of the meaning of words, you could convey that to them individually. If you think that there would be a shared reaction around the table to those glossary definitions, we could do it here. So I guess, you know, until we see what that means, Dave, and where we go with it, I'm kind of open. Let's see what – we've got 40 minutes here. Let's see what other kinds of questions come up.

Again, I don't know where the line is between wordsmithing and substantive kind of stuff. Let's kind of explore that as we go.

Tony, and then I'll turn to George and Dolly.

DR. CHATWIN: Thank you, Mr. Chairman.

First of all, I'd like to commend

Subcommittee 1 on their work. I think it's a tremendous accomplishment to put this together, and I'm very impressed. I'll be very interested to read this.

One area that caught my attention was when talking about the definition of "lasting." I think it -- it's in the glossary. It's the one term that doesn't actually get a definition. It gets referred to a table. And in my experience in dealing with public policy, any statute that has that sort of a setup, it's really open to allowing a lot of confusion and different interpretations. So I would strongly encourage Subcommittee 1 to find a definition for "lasting," and then say this definition applies to the following classification, and then you refer to the table. Because otherwise there isn't really a definition for it. That has caused a lot of trouble in the past with regards to fisheries management and over-fishing and the definition of "over-fishing" and where exactly that was defined. So that would be an encouragement.

The question I had was, the specific dates -- I think it'd be -- or not dates -- but the time periods that we've identified to the different

categories -- I think it'd be very useful for the committee as a whole to hear some of the rationale behind those specific numbers -- the ten years, and how did you get there? Because as I understand it, if a site that's designed for sustainable production has not been defined for a period lasting ten years, or hasn't lasted for ten years, it would not be considered a marine protected area. That's how I understood this classification. And if that's the case, there are a number of sites that were established for sustainable production, but for protection of habitat, that would not fall under this marine protected area. So that's the question I would have for the committee.

Then one comment that I think this committee has to address -- and this is not Subcommittee 1, but the committee has to address -- is, so what is the purpose of being -- what do we achieve by identifying a site as an MPA as opposed to an MMA? What is the incentive? And this is something -- just food for thought, you know. I think we have an opportunity as a committee to think a bit about the incentives. Do the states have incentives to identify, or to move areas that are currently identified as MMAs, to the

MPA list? These are things we should think about over the long-term.

But the specific comments to the document are those regarding "lasting." Thank you very much.

CHAIRPERSON BROMLEY: George.

MR. LAPOINTE: Again, I might be taking part of Mark's thunder here, but in regard to David's comment, all the definitions are incredibly important. We could get into an hour-long colloquy about -- I think about all of them. And so we were hoping to get a lot of people's concerns about the comments, and then go back to the subcommittee and wrestle with them rather than -- we -- we could -- we were concerned about binding ourselves up with too much time on each one of the specific definitions.

CHAIRPERSON BROMLEY: Let me say that I -- that's right -- and I just told Dave, okay, after Rod, who was the last one on the list, I said, okay, Dave, let's go back to your point a little bit and sort of feel our way and see how it goes. So we'll do that.

So, Dolly, you're next.

DR. GARZA: Thank you, Mr. Chair. Thank you to Committee 1. You're making the rest of us committees look bad. But I do have several concerns,

if that's the intent right now. On the visions and goals, the vision under line 11 is based on input from stakeholders and the best available science. That is a little bit contrary to the types of MPAs that you are suggesting, and specifically the cultural one. If you have a cultural MPA, it is not going to be based on stringent science. If it's set up, it's going to be based on other types of values and uses.

Then down under components, line 35, you have cultural resources. Seeing that it is short, what I would add there is "sustainable uses" so generally cultural uses include use by a group of people of an area, and so it isn't just that it exists, but that the use is an important part of that MPA or MMA, if that makes sense.

DR. HIXON: Dolly, just clarification. Your second comment -- so on line 35, you're saying sustainable use of cultural resources? Is that --

DR. GARZA: It needs to be a little bit broad. And I'd be glad to sit down with you or to wordsmith it a bit more. But just the uses needs to be in there so it just isn't that it exists, but that people are potentially using a resource in that site.

DR. HIXON: Okay. Thank you.

DR. GARZA: Okay. The next page, under new MPAs, line 44, rigorous scientific assessment does not work for a cultural site. Rigorous assessment would probably work.

And so those are my initial comments. Thank you, Mr. Chair.

CHAIRPERSON BROMLEY: Good. Thank you.

Rod, you're next.

DR. FUJITA: Thank you, Mr. Chairman. I also commend Subcommittee 1 for their excellent work.

Just a few quick comments. Following up on Dolly's comment about using the best available science, I think that's a general topic that the full committee has to work on, because it's not just with respect to cultural resources that the best available science may not apply, but even in the case of conservation or sustainable production MPAs one could argue that there's a mixture of values that drive the objectives and goals. Science can support the design of MPAs to meet those objectives. But even in the case of protecting biodiversity, society has to make a judgment -- a value judgment as to whether that's important or not, and to what extent, how many species, how much ecosystem area is desired to be

protected.

Secondly, I really appreciate the separation of the sort of -- the system goals which are articulated in the section on goals and the components of the system. But I still think that it might be useful to consider some kind of a statement clarifying that all MPAs don't have to be multiple use MPAs, that there is a place for MPAs completely or primarily devoted to one purpose or another. And of course, that will drive their design in a very important way.

I also had a comment on the durations that are listed. I'm also interested in hearing some more about the rationales. But based on what is written in here, one would think that, for example, with respect to production MPAs, if decadal regime shifts are really going to be driving the minimum duration of an MPA, one would think it would have to be on the order of 30 years, or depending on where you are in the cycle, that would determine how long the MPA would have to be in place in order to see some kind of an effect. So I'd appreciate some clarification on those rationales.

Finally, on line 46, under "New MPAs," you speak to the evaluation of social and economic costs

and benefits. Of course, the ecological or biological benefits could be considered to be part of social value. But often they're not. Sometimes social value is construed as sort of the health of communities, which is a really laudable goal. But I just wanted to make sure or suggest that maybe the consideration of ecologic benefits be made explicit in that list, and maybe to consider some clarification that we're talking about market and non-market value. Sometimes in cost/benefit analyses of this kind, the market values tend to be emphasized, and the non-market values, like social and ecological value, tend to be de-emphasized, and also kind of longer term inter-generational benefits. There's a great deal of literature on this. But to collapse this into a single statement, it's difficult, but I think it's an important point that I would ask you to consider.

Thank you, Mr. Chairman.

CHAIRPERSON BROMLEY: You okay, Mark? You got that down?

DR. HIXON: Yeah. I'm fine. There's been two questions now regarding the rationale for the durations and the lasting protection table. Would this be an appropriate time to add some explanation?

CHAIRPERSON BROMLEY: Yeah. Let me just -- I have, then -- on the queue, I have David -- I put David back in the queue -- Terry, Barbara and Dan Suman -- and Jacqui Schafer now -- and Mel Moon now. So, yes, Mark, keep it sort of brief.

DR. HIXON: Okay. If you'll refer to the table under "Lasting Protection," the key component of this table was to provide a crucial filter for the transfer of MMAs into the list of MPAs. Now, Tony asked the question specifically, why actually create that filter? I would defer to Charlie for answering that particular question. But the charge to us was, what would be the minimum amount of time an MMA under each of these categories would have to exist before it would be considered an MPA? That's really the question here.

The table -- or the column on the far right is sort of the shorthand summary of the rationale that we used under each one of those designations. So, for example, the first entry there under the general category of "Natural Heritage MPAs," there would be MPAs for living natural resources, specifically to protect living natural resources. Our suggestion is that one of those MPAs would have to be in effect for

at least a full decade -- designated to be in effect for a full decade.

Now, if I've interpreted one of Tony's questions properly, we have an explicit footnote in there that said if a particular MMA had been in existence for three years, but was legally designated to exist for at least a decade, then it still fits that ten-year limit. Okay. The rationale, then, on the side here, we discussed two general categories of rationale, one procedural and one scientific for this particular type of MPA. So procedurally it just takes time for there to be public notification, including maps distributed, at least five years of scientific monitoring to get any sense at all of the trajectory of processes within the MPA, including independent scientific review and stakeholder involvement and adaptive management. So procedurally we envisioned at least a decade just to do all that stuff, to have some semblance of a reasonably rigorous process.

Then scientifically, species, populations, ecosystems take a certain amount of time to respond to any type of management that's put in place, and we chose ten years as sort of a minimum generation time.

CHAIRPERSON BROMLEY: Let me -- I'm sorry,

Mark -- let me remind you that really we want to get a lot of feedback in here.

DR. HIXON: I'm done.

CHAIRPERSON BROMLEY: Okay. Fine. Then you guys take it back and find out what it is that's set people off a little bit, and then come back with subsequent presentations and justify it. So I'm sorry to -- okay, David, why don't you -- you know --

MR. BENTON: I'll be quick, Mr. Chairman.

CHAIRPERSON BROMLEY: What exactly do you mean?

MR. BENTON: Well, what I -- I -- I'm sitting here and I'm listening to the presentation, and I've read the document, and I'm listening to the dialogue, and I guess I'm trying to take a little bit of a step back and not dissect this, but look at how it would work in its entirety as components, as a package. So my question to Mark -- and I'll direct it to Mark -- is -- and I'll use an example -- under the vision, I don't have any problems with that. It's pretty general stuff. The goals, okay, fair enough. The -- as long as under the goals there's a broad catch-all that says it can be other things, too.

What I really get down to is, under the

components of the national system -- and I look at this, and I'm now thinking of an area that's already existing. I'll use an example of the North Pacific.

CHAIRPERSON BROMLEY: People can't hear. Try to talk into the microphone.

MR. BENTON: Sorry. Let me move this over, because I like to look at who I'm talking to.

An area in the North Pacific -- let's say -- I'm going to use one that's going to be very difficult here, a little bit of the grey area. We have an area in the Bering Sea that's called the Chinook Salmon Savings Area, Chum Salmon Savings Area. Okay. It's got -- it's legally defined, has geographic boundaries on a map. It is in there in regulation. It is under NOAA, National Marine Fishery Service Regulations, Council FMP. It is established with an open end on the duration. All right. It's been in place now for maybe seven, eight, maybe even ten years. Okay. So it already meets the ten-year criteria technically. But it doesn't have an expiration date. Okay. But there are also -- and -- and what it does is it is an area that is closed when a certain level of salmon by-catch occurs in the major fisheries in the Bering Sea. It's there for a conservation purpose, and that's to

conserve those salmon and to reduce by-catch, which is one of the things that you have under "Components" that you've identified.

There are also, though, some mitigating factors that are going on. There may be some -- because of ocean and climate change issues, there may be some distributional changes in salmon migration. So the North Pacific Fishery Management Counsel and National Marine Fishery Service may be looking at altering the geographic boundaries, changing this thing around.

Would that -- under your system, does that qualify as an MPA or an MMA? How does that fit? I'm trying to -- see, I'm trying to run all the way down through this, and I can -- okay, it meets the vision, meets the goals, it's under the components. It sort of meets the duration issue. It meets all the other criteria. But there's these other things that might go on that may get changed, may get modified.

CHAIRPERSON BROMLEY: Okay. Could I ask a clarifying question? You say it runs indefinitely, but is it a performance-based trigger, so that once the evidence seems to suggest that by-catch is down and salmon are doing fine, then it would be lifted by

the Fisheries Management Council?

MR. BENTON: No.

CHAIRPERSON BROMLEY: Is that what it is?

MR. BENTON: No, it isn't. It's a place in regulation, and it's in place every year, and there is a --

CHAIRPERSON BROMLEY: Renewed every year?

MR. BENTON: It doesn't have to be renewed. It's in place, period. So there is a trigger, a certain amount of salmon, if they are taken as by-catch, the closure goes into effect, and that system -- that management system -- that designation and restriction is always in place unless it's changed by the council.

DR. HIXON: Okay. I'm not going to try to pass judgment on that particular entity right now. But in my mind, the key parts of the document are not the "Components" paragraph on the first page, but actually the definition of "MPA" as we have listed in the glossary. So is there an explicit area that's designated? It sounds like there is. Is it marine? Yes, it's obviously marine. Is it reserved, legally established? It sounds like yes. Lasting? It sounds like it's already been in place for almost ten years.

So the key issue in my mind comes down to the definition of "protection" for this particular entity. And I'm not going to pass judgment, but our definition is specifically established for the goal of providing an enhanced level of conservation for part or all of the natural and cultural resources therein. And that's -- to me, that would be the crux for that particular example.

MR. BENTON: Fine. You're sort of dodging my question, because does that -- it does enhance conservation. That's what it's there for. Okay. Would that qualify it? Or do I look at these definitions for more precision and more clarity so that I know whether or not it fits? And you guys wrote this. Somebody ought to be able to tell me whether or not it fits.

CHAIRPERSON BROMLEY: Okay. The question is, do we want to pursue this line now, or do we want the subcommittee to take it back and come back to us later today or something with an answer that may or may not satisfy David?

MR. BENTON: Oh, I think -- frankly, I think -- and it's not just this example. I was just using it as an example.

CHAIRPERSON BROMLEY: Yeah, that's fine.

MR. BENTON: That's just an example. I don't care about the example so much. I do care about whether or not the definitions and the system that you -- you know, sort of the hierarchical system you've put together can lead you to a reasonable and consistent conclusion --

CHAIRPERSON BROMLEY: About --

MR. BENTON: -- about that kind of a thing.

CHAIRPERSON BROMLEY: About the filter.

MR. BENTON: Yeah. We're talking about the filter now. And that's really it.

CHAIRPERSON BROMLEY: Good.

MR. BENTON: So I don't necessarily need an answer.

CHAIRPERSON BROMLEY: That's great. That's great, David. Thank you. That was a good elaboration.

Okay. I have Terry, and then Barbara, and Dan Suman.

MR. ZALES: Excuse me, Dan. If I could just point David -- and this may answer your question. If you'll look at the footnotes for definitions under "lasting," and you read number three, and you look at

3(b), that may answer your particular question, because from what you described, I would then assume that that would stay as an MMA because it's kind of a seasonal type thing. But that's just -- if you look at the footnotes along with all this and the glossary, that will help answer a lot of the questions I think that are being asked right now.

CHAIRPERSON BROMLEY: Yeah. That's good. I think also the point that Dave raised, however, is that somewhere in -- not in footnotes, but somewhere in the body of this document that more clarity and more elaboration might be called for, I think. But let's keep hearing reaction.

So, Terry.

MR. O'HALLORAN: Thank you, Mr. Chair.

I'm still having a lot of confusion over MMA/MPA. I see here we're saying we have a forthcoming definition in the Federal Register of an MMA. When is that expected?

DR. HIXON: I believe Charlie mentioned this morning that it was going to be this fall. Is that right, Charlie?

MR. O'HALLORAN: This fall.

DR. WAHLE: Yeah, it's in the final --

literally the final stages of signature, and we're expecting it within the next couple of months. I believe it's for all intents and purposes done.

MR. O'HALLORAN: Okay. Because in the footnotes there's references to MMAs and MPAs, and in particularly 3(b), where it talks about the seasonal protection and where the absence of removal of such explicit periodic protection means that the site is no longer an MPA, but is now an MMA. So I think it's -- at least it's hard for me to kind of get my head around MPA without knowing what MMA is.

The other comment I have is in the vision statement. Again, a question: On line 8 where it's -- you were talking about a national system of protected areas and MPAs that meets multiple conservation and management objectives. I guess my question is, here in Hawaii, we have a Hawaiian -- or a humpback whale national marine sanctuary. It's a single-species protection. And I'm not quite sure if that meets that vision or not. So it's -- I guess I would need some clarification there.

DR. HIXON: Yeah. The clarification there, Terry, is that we're talking about the entire national system would meet multiple conservation and management

objectives.

MR. O'HALLORAN: Okay. And not relating to a specific MPA as part of --

DR. HIXON: No. No one specific MPA would be expected to do everything.

MR. O'HALLORAN: Okay. Thank you.

CHAIRPERSON BROMLEY: All right. Thank you. Barbara.

MS. STEVENSON: I have to steal a mic. I want to agree with all of what Dolly said and most of what everybody else said. I'm very confused as to what the difference between an MMA and an MPA will be, and what the value of being an MPA as opposed to an MMA is.

A number -- and that gets to my significant issue on "lasting," because I can't figure out what the ten years is for, because for some things it's way too short, and for some things it's way too long. If it takes you ten years to draw a map, we're in big trouble. So I have a lot of trouble as to why specifically ten years, why things that I can think of to deal with certain issues which would be very helpful to sustainable production wouldn't be included as an MPA even though the specified time period might

be shorter than that. But then again, depending on what the difference of the definition might be, maybe I don't want 'em to be defined as an MPA. So if I have those questions in my mind, we really need to be sure we all understand what the differences mean.

On the third page of your draft, when you say "rigorous scientific assessment of the proposal," does that mean if you can't scientifically assess it, you will not do it? It says "evaluation," but it doesn't say whether it has to be positive or negative. So there are a number of problems there.

In the definition of MPAs you talk about by-catch, but you don't define what you mean by "by-catch" and what it might do with it.

In general, there are a number of issues which I'm not going to talk about right now which have to do with the definitions of things that Subcommittee 2 has been talking about, like "adaptive." I'll just use that as an illustration. My hackles went up under your definition, but there are definitions that will work.

CHAIRPERSON BROMLEY: Thank you.

Dan Suman.

DR. SUMAN: Okay. Thanks. Just a few short

questions or comments.

On line 48, I think maybe it might be better to change the lang- -- or expand the language a little bit and talk about -- and mention evaluation of important national interests, which are more than national security, but also navigation, and as the Oceans Commission Report lumps all of them together, economic development and recreation, as well -- but much more than national security.

And then in your definition of "marine" on lines 82 to 84, I'm just trying to imagine how we might fit an area like, say, Biscayne National Park that's 95 percent marine and five percent terrestrial into this definition, where you say intertidal areas would be the upper limit of the MPA. So then I would assume, say, as far as BNP -- Biscayne National Park -- is concerned, that the marine protected area part of Biscayne National Park would only be -- would not include the highlands in the park -- or Elkhorn Slough would only -- the marine protected area part of Elkhorn Slough National History and Research Reserve site would only include estuaries to .5 ppt, but not up -- but not the other parts of the protected area. Right?

DR. HIXON: We explicitly excluded terrestrial habitats from a definition of "marine protected area."

DR. SUMAN: Even though they are part of an existingly (sic) designated protected area, coastal and marine?

DR. HIXON: And we also -- but we've -- well, I can speak only for myself at this point -- but certainly integrated terrestrial and marine management is absolutely essential. There's no question. However, in our discussions, we stuck with saltiness as a definition of "marine" except in the case of the Great Lakes.

DR. SUMAN: And then what about species -- salmon -- that have some kind of special -- not only endangered stat- -- endangered species status, but also some kind of area management that extends from the ocean upstream to spawning sites? Then you just knock out any area management, protected management upstream past .5 ppt for salmon?

DR. HIXON: When the salmon are in fresh water, they'd be under a different management regime. They would not be in a marine protected area when they were at their spawning sites.

DR. SUMAN: Okay. Okay. And then my final question concerns the Great Lakes, because now you've really defined "marine," "intertidal" and "estuary" sites. But then Great Lakes, now, that knocks everything out. Now, how far up would you go in Great Lake estuaries? Would you include adjacent wetlands to the Great Lakes?

DR. HIXON: We spent a certain amount of time talking about the Great Lakes, and were told that the federal government has very explicit definitions regarding the Great Lakes that are involatile (sic). If we just put in "Great Lakes," the federal government will take it from there.

CHAIRPERSON BROMLEY: Inviable?

DR. HIXON: Inviolate is what I meant.

CHAIRPERSON BROMLEY: Can't be violated.

DR. HIXON: Yes. Sorry.

CHAIRPERSON BROMLEY: I thought you said something about volatile.

DR. HIXON: Yeah.

CHAIRPERSON BROMLEY: It may be that, as well, but I think what you meant, for the record --

DR. HIXON: Slip of the tongue.

CHAIRPERSON BROMLEY: -- is it can't be

violated.

DR. HIXON: Sorry.

CHAIRPERSON BROMLEY: Okay. We have three more on the list here, and we're running out of time.

Mel.

MR. MOON: Actually, some of these have already been covered to some extent. But on page 3, on line 44, I also agree that there's more involvement of issues that are outside of just the scientific assessment process. There's social, economic and traditional ecological knowledge. There's a whole host of assessments that can take place. So we need to broaden that.

On line 48, also on that page, I had a question of why we had security issues on there. Perhaps Dan's suggestion on inserting "interest" maybe there -- I'm still not quite sure why it's there, but -- so there's a question in my mind.

Then the last bullet point I wanted to make -- or add perhaps -- was a process that would be inclusive of all relevant managers from the beginning. We all talk about stakeholders, but I think it's important that all relevant managers be involved in the process from the beginning in terms of any new MPA

designs.

On page 5, at line 165 and 168, you have a title of "Ecologically Important Species." I kind of wondered why and how you can define that one's more important than the other. It's -- it's -- I mean, I think it's pretty much common knowledge that all species are ecologically important, and their linkages, and perhaps what we're looking at is identifying those species that we know and don't know, and processes and linkages that they have in relationship to one another.

So those are my comments.

CHAIRPERSON BROMLEY: Good. Thank you, Mel.

Jacqui Schafer.

MS. SCHAFER: Two questions. One is, why you make a distinction or why you have a separate set of factors for adding new MPAs from those that graduate from being MMAs to MPAs? Why is there a different set of criteria?

The second point might get to a lot of these other questions, and that is, who decides? You have a bunch of definitions here, but there's no discussion -- and maybe this isn't this subcommittee's job -- but there has to be a -- who decides whether

something actually goes from an MMA to an MPA, and what the process is for that. That might actually be the key to some of the other issues that have been raised here. There's a lot of words here and a lot of definitions. But one assumes that there has to be a body or set of bodies that makes a decision about whether a particular area is an MPA and is part of this national system. So I'd just raise that.

CHAIRPERSON BROMLEY: Good. Thanks, Jacqui.

Rod Fujita.

DR. FUJITA: Yeah. Thank you, Mr. Chairman. I just want to return to Dave Benton's point, because I think it's really crucial. It bears on really what the baseline is for determining whether an MMA is really an MPA or not. What I think it means is that -- well, Dave described a conservation area that I assume is part of a fishery management plan, and there are many such managed areas all up and down the West Coast, and I'm sure on other coasts, as well. In fact, if those are considered MPAs by virtue of the fact that they enhance conservation, I think you're saying it's enhancing conservation relative to no management, right? Then almost all of the EEZ could be considered an MPA, because there's regulations

pertaining to fisheries, including closures that happen when hard by-catch caps are hit or total catch limits are hit. They happen all the time, every year, all over the place.

I think you have to really consider what the baseline is when you say the MPA has to enhance conservation. If it's enhancing conservation relative to existing fishery management, then that really narrows the window for what constitutes an MPA.

CHAIRPERSON BROMLEY: Thank you. We have two more people on the list, two minutes left. So I'm going to ask for brevity. Lelei, you're next, and then Dave, and then I have Bob Bendick.

MR. PEAU: Thank you, Dan.

I just want to make an observation. I'd like to draw your attention on line 42 on new MPAs. I think there's some really good opportunities under this definition to really look at -- and again, let me also phrase it that this may not be the right topic for this -- but opportunity for international regional approaches and linkages and networking. Some of the island territories, like American Samoa, Guam, CNMI, have a really good relationship with international communities. There's a lot of people that are

interested, and are also looking forward to the output from this commission.

I just came from a meeting of a South Pacific regional organization, which consists of 24, 26 countries of the Pacific. One of the strengths of this networking is to share our resources and information and so forth. In the islands, sometimes networking is helping develop a regional approach in MPAs, help promote the incentives, and also help to conserve the same resources that we share, because of the overlapping of water EEZ I think is really helpful.

I'd like to -- because there's opportunity for us to make those linkages, I would -- personally would like to see something that would reflect or acknowledge interaction with international community that are not part of our national system, but there are opportunities that can really strengthen our work and also promote some of the work at the regional level.

Thank you.

CHAIRPERSON BROMLEY: Good. Okay. Dave Benton.

MR. BENTON: Thank you, Mr. Chairman. This

is just a minor point, not in response to Rod's comments, but my other example. Looking at new MPAs, one thing that I noticed that was lacking here is -- as a factor that should probably be considered is the problem to be addressed. I see you have clearly articulated goals and measurable objectives. But I also think that there needs to be a statement of what the problem is, why we're -- you know, why we're doing this, why we're setting up the new and individual MPAs. That may be part of the goal and measurable objectives. But you might want to think about that one.

CHAIRPERSON BROMLEY: Thank you. Okay. Bob Bendick, and then Steve Murray, and then I think we have to close the list.

MR. BENDICK: I think a lot of this discussion raises a question that maybe needs more attention, which is whether we're trying to create some sort of basic framework of MPAs that deserve national attention and support, or whether we're trying to somehow incorporate every state, local or national protection into a national system. For example, the system of national wildlife refuges is a system nationally set out that protects -- is supposed

to protect the whole diversity of wildlife in the country. But it doesn't say that it takes into account every state wildlife management area, every regulation to protect wildlife.

And I think we've got to figure which we're doing here. One is an incredibly complex thing to do, to somehow weave together every measure to protect marine areas into a national system. What does that mean? Another is a more discrete function of, from a national level, trying to identify that array of systems, array of places, that are kind of the safety net of our national marine heritage for cultural or fisheries production, for biological diversity. And I don't think we've figured out which it is we're doing yet.

CHAIRPERSON BROMLEY: Good. Thank you, Bob.

Okay. Last comment from Steve.

DR. MURRAY: I'll be quick, Mr. Chairman.

Just two points -- first is that we should all appreciate that both the vision and the goals paragraphs are with respect to a national system and applied that way, and that the individual components follow next, and they have specific goals or other sorts of commentary about them.

The second point is simply that I think -- as part of Subcommittee 1 -- I think we readily pointed out that we were lacking some expertise in cultural and other issues. Some of the comments that have come forward address those particular areas that we really would like to see input in. And so what I would hope would be that those of you that had some comments, if you could script some new text and hand it over to this subcommittee, that would be a very effective way for us to move forward with that.

CHAIRPERSON BROMLEY: Thank you, Steve.

Okay. Mark and your group, you've done a marvelous job.

Let me offer some thoughts here about this process. As we know, each of the subcommittee reports will come back to us now, and particularly in February, in need of action, in need of approval. It seems to me now -- and I'm saying this now because it pertains to all three subcommittees -- now is the time for you to work really hard to get this document in a position that it can attract almost unanimous approval when that time comes.

I'd like to offer the idea that the best way

to do that would be for each of you, after you have gone through this thing that Subcommittee 1 just went through, as you meet today and tomorrow, you take this list of concerns that you've heard, these concerns about meaning -- you know, what exactly do you mean here? -- and see if you can't synthesize them and create seven or eight or nine difficulties that you encountered with our group, that you appoint one of your members to be an advocate for the concern that you have identified there, and that you -- that that individual in a sense carry the ball for the points that were made in this room, and that you really set up within your subcommittee an adversarial relationship so that the subcommittee doesn't just say, oh, no, no, we've dealt with that, next, next, next -- that you really empower your members to be an advocate for the concerns that you've heard here, and work really hard to bring each of your subcommittee reports along in light of the fussing that you have heard and that you will hear. Because if you cannot satisfy the members around this room that you've taken their concerns seriously, I know very well what will happen when you come forward, each of you, with your final report at the end of this meeting or in

February. It's going to encounter the same kind of thing.

So I'm just offering a strategy here for you to empower each of your members to be the advocate for the concerns that Benton raised, that Fujita raised, that Barbara raised, that other people have raised, and that you guys have a real serious struggle now within your committee to address that. Okay. And that's not just at you, Mark, but it's all of 'em. I think if you go through that in an honest sort of hard-hitting way, then when you come back to us with something final, you have an easier sailing than otherwise.

George.

MR. LAPOINTE: That's a great suggestion, Mr. Chairman. I think the committee can do it. Another suggestion might be for the next meeting is the format of bee-bopping between one subcommittee and the next allows us a lot of exposure, but doesn't allow us time to wrestle with the issues. So at the next meeting, we might want to have a half day of Subcommittee 1 and a half day of Subcommittee 2, so that in fact when we've had that tension, when we come back, we can really -- we can wrestle it to the ground

so we can come to the successful conclusion we're looking for.

CHAIRPERSON BROMLEY: That's fine. Thanks, George.

Okay. Very good. I think that went well. Thank you.

Subcommittee 2, stewardship and MPA effectiveness.

MR. PEAU: Thank you, Mr. Chair. Given the budget constraint, Subcommittee 2 really didn't go into a massive production like Subcommittee 1. But we managed to continue with our work task given to us. I'd also like to really commend all the members of Subcommittee 2 on their commitment and their interest in moving forward with our task, given some of the issues that we have to struggle with.

Our committee had a series of conference calls in the past, which also lead to the subcommittee meeting that was held in Seattle a couple weeks ago, and also with the -- another phone call to really bring some of the issues to closure, which lead us to our discussion this morning.

I might also say that in the development of our recommendation, we spent some time on developing

guiding principles to help us focus on our task, but really to also have the -- formulate the consensus and the partnership among ourselves so that we can really move forward with our agenda.

Our committee developed key elements, a matrix, which also helped formulate and helped us developing our recommendations, which you will hear shortly. But there's a lot of work that went into this. I'd also like to stress that this is a work in progress. Our committee continued to make progress, but I think the -- our goal this morning -- you know, as Committee 1 -- was to solicit input and comment from all the members, to ensure that we -- before we -- we -- we go to massive production, we want to make sure we capture all the comments and all the questions and concerns that the members might have. That will not only help us move forward, but also will resolve or address some of the caps we have developed, address some of the concerns on the definitions that were raised by group number one that will also be presented shortly. But again, the whole purpose of the exercise or task are really to feel consensus among not just among group number one, not just subgroup number two, but among all the members so that

we can all be comfortable with the final recommendation that will be submitted later on.

So without any further ado, Mr. Chair, I'd like to ask Tony to go through the exercise, the key elements based on the key – on the -- on the principles that were developed by the group, and then followed by Bonnie that will also discuss some of the three definitions that our group has voted be submitted to the plenary.

So, Tony.

DR. CHATWIN: Thank you, Lelei.

So the purpose of my very brief presentation is just to give you a context of how we arrived at the draft recommendations that we did. Basically, we first set off by looking at various issues that we know are important with respect to stewardship and effectiveness in relation to MPAs. Then we started to develop a big outline that sort of fleshed out those issues.

We then realized that we needed a framework in which to focus our efforts to move us from sort of generating information to coming up with draft recommendations. This is where the key elements matrix comes in.

Recognizing that MPAs are multi-dimensional entities, we tried to sort of be explicit about those dimensions, and then identify the key elements, again, with regard to stewardship and effectiveness within each of those dimensions. And so -- and the political dimension -- and I'm not going to go through all of them. This is just to give you the context -- for the sake of time. But I'm happy to discuss this in more detail after this presentation or at a different time.

As an example, key elements of the political dimension of MPAs are the MPA objectives and how you set those objectives and the participatory nature of setting the objectives is key to enhanced stewardship around MPAs. Setting clear objectives, and then designing the MPA to meet those objectives, is a key element of the effectiveness of an MPA. So that's how we structured it. Basically, taking this to the draft recommendations is -- well, what we did was basically add another column, which were the recommendations.

We worked through -- in our meeting in Seattle, we worked through a facilitative process to develop those draft recommendations. Terry is going to talk to us more about the outcome of that.

MR. PEAU: Before we go into the Seattle

outcome, I'd like Bonnie maybe to go through the three definitions. Then Terry will report on the specific recommendations.

VICE CHAIRPERSON McCAY: Okay. Our committee is charged with looking at effectiveness and stewardship. So those are the first two definitions that we came to some agreement about. "Effectiveness" is really a no-brainer. It's the extent to -- the degree to which management actions are achieving the goals and objectives of anything, in this case, the marine protected area.

"Stewardship" is more difficult to define because there are lots of different definitions of it. But this is our working definition: a commitment to careful and responsible management of both individual MPAs and a national system of MPAs to ensure that the goals and objectives are being achieved for the benefit of present and future generations.

The third definition is "stakeholder." Our definition talks about stakeholders as individuals, groups of individuals, organizations or political entities that are interested in and/or affected by the outcome of MPA-related decisions. We added that stakeholders may also be those who are likely to have

an effect on the outcome of MPA decisions.

We have, and we'll make available to you, the discussion which is going to be the basis of some recommendations where we are, first of all, recommending that whenever feasible and practical, it's important to be more specific about what is meant by "stakeholder." We recommend following the practice of -- in our subcommittee in recommending -- and replacing that with phrases such as "interested and affected parties." And what we've added is also the notion of "affecting" parties.

Briefly, let me state that we're thinking of these in terms of -- in recommendation framework in relationship to what an agency should be aware of. An interested party is really a synonym for those who usually appear as participants in formal decision-making arenas. "Affected party" is an important idea, and this suggests that special efforts should be made to identify parties that are or would be affected by MPA-related decisions, whether or not they express an interest in them. So this is an outreach idea.

An "affecting party" is another outreach idea. These would be individuals, groups or organizations that may or may not express any interest

in it, but through their actions or inactions, can affect the outcome. Special efforts, therefore, should be undertaken to identify these parties and invite them to participatory venues because of their importance to the outcome.

So we will make available to the rest of you the larger document discussing these, as well as we already have these definitions. We have agreed upon these. We have come to consensus on them, and are looking forward to your input.

MR. PEAU: Terry will now report on the outcome of our shell meeting, our recommendations which spill over from the matrix. Terry.

MR. O'HALLORAN: Okay. Thank you.

As Tony outlined, we worked from several key elements in this -- in our discussions. We added essentially a column to those key elements in which we addressed each of those and developed at least the beginning of what we feel are the start of recommendations.

Now, this is very much a work in process -- or in progress. We welcome the comments and input from the rest of the committee on this. You can see that in the packet, our draft recommendations are

there. We've got some discussion items that follow some of these particular areas, like in schedule, rules and responsibilities.

So we still have a lot of work to do, a lot of wordsmithing to do. But I think what we've done is we've captured our initial thoughts on how our recommendations might be framed.

The other thing that we discussed that will need more discussion is this notion of science in the formation of MPAs. We all understand that science will be a big help in helping us with the developmental process of MPAs. But we also understand that science most of the time is not the driver. In our subcommittee we are dealing with process. And in this process, the management of the people is critically important. And when we get into that arena, we are more in a political arena rather than a science arena. It's the idea of this precautionary approach to MPAs and how we articulate that in a way that might be helpful to the agencies in coming -- in helping understand processes for development and implementation of MPAs.

So again, very much a work in progress here, and we welcome comments and input.

MR. PEAU: So that's what we have, a work in progress, Mr. Chair, so we're open for comments. We intend to build upon whatever recommendations or suggestions we'll hear from the group as a whole.

CHAIRPERSON BROMLEY: Right. Good. Thank you so much.

Okay. George.

MR. LAPOINTE: A couple questions to Subcommittee 2. Under "MPA Objectives" -- and this might be George's simple-mindedness -- are goals measurable or are objectives measurable? Just to -- Max whispered to me goals aren't usually measurable, and that's why I ask the question. But that's just a comment.

And then on page 3, under "Implementation" -- it's line 18 through 24 under "Implementation" -- fully fund to implement MPA work and final plan -- I think -- I just have a question about individual MPAs or network. You know, I think we need some distinction there as you continue your deliberations.

CHAIRPERSON BROMLEY: Is that it, George?

MR. LAPOINTE: That's it.

CHAIRPERSON BROMLEY: Yeah. Thanks.

I have a few thoughts, and seeing no hand,

I'll put myself on the roster here. Under effectiveness, would it make sense to talk about administrative coherence and cost-effectiveness? I mean, the degree to which management actions are achieving the goals and objectives of a marine protected area, at what cost, and at what level of administrative whatever? So that's just an observation for you.

Stewardship, it reads to me like a goal statement or a vision statement. It seems to me if you took out the first six words there, you might fix it. In other words, stewardship is not a commitment to careful and responsible management, it is something. And so I just ask how you would feel about starting your definition of "stewardship" with the word "management of individual MPAs" -- blah-blah-blah. So this is kind of wordsmithing, something I said we shouldn't consider. But I don't see any other hands up, so I am happy to wordsmith. Those are two thoughts that I have in reading those two.

Your "stakeholder" definition -- I have looked hard, and I can't see anyone who's excluded. But maybe that's the nature of that word in politics

these days, that stakeholders are what you said. I resist saying any more about stakeholders.

Okay. Max.

MR. PETERSON: Mr. Chairman, I see this subcommittee and ours struggle with the whole question of what is this system going to look like in terms of who decides, are all MMAs MPAs, and so on? Let me give you a thought at least. There are several existing systems out there that have been established over the years by Congress. The Wilderness System is the oldest. It, by law, is only federal areas. There are no state areas in that system. So that's a restricted system. The other two systems that are out there that are broader are the (indiscernible) rivers, which can include federal, state and local trails. But there's a nomination system that -- that -- the federal government doesn't put a state trail on the system. The state nominates the area, and if it meets the criteria, it can be put on there. That's somewhat similar to the National Trail System, where it's not every trail that's out there.

So we did not think in our subcommittee that every MMA was an MPA. So at least to me, I see this system as being composed of federal, state, local and

tribal areas that would go through some kind of nomination system, and the state itself would be the one to decide -- or the tribe or so on. So I think we haven't talked about that, but somehow we maybe need to talk about our concept of a system that's composed of areas that are administered by several different groups.

It also is not every area that has fisheries management restrictions on it. There's a system out there for doing that, and we didn't think MPAs would encompass all those.

So anyway, those are just some sort of random thoughts that maybe would help us struggle with that in both Subcommittee 1 and 2.

CHAIRPERSON BROMLEY: Right. Good. Thank you, Max.

Okay. Gil.

MR. RADONSKI: I'd just like to second Max's comments. It became apparent to me during Subcommittee 1's deliberations that not everything has to be in the national classified MPA system. It's obvious the states have their own programs. There are communities, particularly in the Caribbean, that have MPAs for specific purposes that may not need to be

part of the MPA system. So I think Max raises an excellent point that there should be some provision in our recommendations that allows these entities to nominate systems to go into the national system. And I thank Max for that very thoughtful comment.

CHAIRPERSON BROMLEY: Good. Barbara and then Tony.

MS. STEVENSON: Just on the discussion of stakeholder, and your comment that it includes everyone, and that's one reason that we're suggesting that you not use that word. But the issue of adding "affecting," if you go back to the comment on Subcommittee 1 while they were discussing if you had a salmon MPA that went up the rivers, it's very important for the people up the rivers who, if they don't do what they're supposed to do, it doesn't matter what you do in the MPA. It's very important for them to be involved. That's why it's so important that we add the concept of "affecting," because it might not matter at all in their lives what happens in the MPA. But what they do matters significantly for the MPA.

CHAIRPERSON BROMLEY: Tony.

DR. CHATWIN: Thank you, Mr. Chair.

Just two things. One is to add to Max and Gil's comment. Maybe we want to look at the National (speaking unintelligibly fast) Research Reserve nomination process. It seems like a very participatory bottom-up process. But we have to remember that there's an incentive there for this nomination. That's something I'll go back to again.

At this point, there isn't a clear incentive for states to get their -- as far as I can see -- their -- their sites listed. So that's a good point.

The other point I have is to your comment, Mr. Chair, regarding the definition of "stewardship." I think if you remove those six words and define it only as "management of individual MPAs," then what you're -- MPAs in the national system to ensure that goals and objectives are being met, what you're talking about is effectiveness. Really what we wanted to capture is that the commitment to making them effective is from a broader group of parties than just the managers. And the management really is the responsibility of the managers.

So just some more sort of back then and now thoughts. Thank you.

CHAIRPERSON BROMLEY: Mary Glackin.

MS. GLACKIN: Just a follow-up to that point and to really resonate with it, we within NOAA use the word "stewardship" quite liberally. We talk about as one of our goals trying to educate the public to be good stewards of the environment. You know, I think it -- I'd hate to see that lost, I guess, in this concept here that stewardship is something that we all have influence on, whether it's our recycling habits or whatever. So I guess I'm a tad uncomfortable with the word, equating stewardship to management, although I must say the current definition here isn't ringing with me with the six words still in it. It still equates to management with me. So then, just a thought.

CHAIRPERSON BROMLEY: Thank you.

Lelei, and then Tundi.

MR. PEAU: I go back to the point I make (sic) earlier. I think it's also mentioned by Gil and Max on --

CHAIRPERSON BROMLEY: Can you speak into the --

MR. PEAU: -- Gil and Max on the flexibility or having a provision to allow for flexibility in developing MPAs.

One other thing I'd like to reiterate on the stewardship, I know we talk about commitment and we talk about management. But the real issue here, from my perspective, is really the ownership and values. If people do not see the value of the conservations and protections, they would not be part of, they would not buy into this process. We talk about enforcement, and we talk about empowering local communities to become stewards of the resources. Again, that's really difficult to promote whatever ingredients if they cannot see the value.

And I mentioned earlier about having the flexibility in the islands where you see a lot of opportunity where they can be networking with neighboring island countries, and they see the value of sharing those resources, and they buy in because they see the benefit, and then there's the longevity of their efforts and their work. So I think we all struggle with the system and how this can become more the electing process to acknowledge some of the existing models and some of the successes within some of these local communities. It really needs to be captured within our national system or national framework of MPAs. But I think values and ownership

is only -- will only take place if it's a bottom-up approach, and believe the success, and believe the -- to -- to promote or to protect those resources, not just for the future, but -- not just for the present, but as far as the future generation.

Thank you.

CHAIRPERSON BROMLEY: Yes. Thank you.

Tundi.

MS. AGARDY: Thank you, Mr. Chairman.

I'd like to commend also Subcommittee 2 for looking at the other side of the stakeholder coin. And I just wondered whether you've been deliberating about how to kind of balance the idea of affecting stakeholders, because it's essentially a kind unbounded concept with the way coastal and marine systems are.

I don't dare make an example in the U.S., but I'll make an example -- make a hypothetical example, for instance, in Mexico. Would you consider affecting stakeholders in the case of the Gulf of California to be ranchers and farmers who divert water from the Rio Colorado, and thereby affect the marine protected areas in the Gulf of California? They are affecting parties, but I don't know how you could consider them

to be stakeholders in an MPA planning process.

I just wonder whether you've been thinking about how far to extend that kind of umbrella.

CHAIRPERSON BROMLEY: Do you want to answer, Bonnie? Do you want to respond?

VICE CHAIRPERSON McCAY: I'd like to just briefly respond to that -- to Tundi's comment. I think it's an extremely important one. What it suggests to me is that -- and, yes, this is what we did have in mind, and it does suggest that we're -- we're moving -- in -- in defining stakeholders in this way, we are moving toward ecosystem-based management in order to -- and, you know, MPAs are part of larger, more complex systems, and talking about affecting parties is one way to realize that.

DR. FUJITA: If I could just follow on to that. I think Tundi's made a really important point. I think she made a really good suggestion, really, that we might consider the different processes that these folks are involved in. I mean, the process of deciding that an MPA is needed, and designing the MPA to meet those objectives, could involve one set of parties, and the management and effectiveness of that MPA could involve these affecting parties. They may

not necessarily, you know, have much to contribute or be concerned with with respect to setting goals and objectives and design. But they certainly have a lot -- they need to be brought in in an ecosystem management framework as affecting parties at the implementation end of the process. So we'll consider that in subcommittee.

CHAIRPERSON BROMLEY: Are there other comments that would like to be offered to Subcommittee 2? Yes, Brian?

DR. MELZIAN: Thank you, Mr. Chairman.

These comments are twofold. Some relate to the general committee, but also relate to the excellent draft recommendations of this subcommittee.

First, regarding the schedule, just based on my own experience and EPA's experience regarding rule-making and implementation of federal statutes, schedule is important. It's important to let everyone know. I use the analogy of a train going down a track, and hopefully the light at the end of the tunnel's not another training coming towards us. But indeed it is a train in that this MPA in fact is now produced, and it is now going down the track.

So in regards to the comments that are to be

received by the very subcommittees today after this meeting this week, I just make a friendly recommendation that each subcommittee give some type of time frame when you need those comments back so you can move on with your report. This is why I wholeheartedly endorse the chairman's recommendation that the February meeting should be near the end of that road so that we know what we're going to be doing as of June. So I cannot under-emphasize (sic) not only the deliberations of this committee, but also, if and when we get to designations of the marine protected areas.

Secondly -- and NOAA's done an excellent job of publishing in the Federal Register and getting the public involved during these meetings -- strongly encouraged as we go down the process, at certain seminal points in the process, is publishing availability of documents via the Federal Register. We are now doing that in regards to the Integrated Ocean Observing System. The next development plan will be made available via the Federal Register in the middle of October of this year for one month.

The reason for that, even though we convene and get experts throughout the entire country involved

in these deliberative processes, I absolutely guarantee most of the people in the United States have no idea that this is happening. Secondly, there's a lot of expertise out there that we're just not aware of. Thirdly, it covers all bases to allow us to finish this journey on a legal basis. You'd hate to go through all this, and then find out, oops, based on NEPA, CEQ, or whatever, you have to start over.

The third point, regarding communications, cannot under-emphasize (sic) how important communications are now and in the future. Those are communications -- and as Lauren knows -- that the feds need to start doing our annual report to Congress -- communications that go directly to the President via the CEQ -- Council on Environmental Quality -- Office of Science and Technology Policy, and others regarding this committee's activities, because they relate to what's happening with the executive order. But they also relate -- they can relate to the administration's response to the Oceans Commission's report.

Then lastly, they relate to any potential legislation, new or revised, in the future. These communications could consist of simple one-pagers, one-page documents summarizing activities of this

committee to date, things of that nature, and maybe future activities that are sent widely throughout the federal government and other interested parties.

Thank you.

CHAIRPERSON BROMLEY: Thank you, Brian.

Okay. David.

MR. BENTON: Thank you, Mr. Chairman.

Just a quick question, maybe to Lelei -- I'm not sure. But one thing that -- and this thought started with Subcommittee 1 and continued in my head rattling around through Subcommittee 2. I haven't seen any mention of TEK -- traditional ecological knowledge -- and I'm wondering where that fits in here. It seems to me it's an important factor that needs to be incorporated someplace. Maybe it's here, maybe it's elsewhere.

CHAIRPERSON BROMLEY: Good. I'm sorry. I crossed you off prematurely. Oh, did you want to respond to --

MS. STEVENSON: We do have co-management and TEK in ours. Over lunch I'll make sure it gets into Subcommittee 1's.

CHAIRPERSON BROMLEY: Thank you. Okay, Eric. Twice spurned. Now is your chance.

MR. GILMAN: I just wanted to make a suggestion that Subcommittee 2 might want to consider --

CHAIRPERSON BROMLEY: Speak into your machine there, please.

MR. GILMAN: I wanted to suggest that Subcommittee 2 could consider aspects of financial sustainability in terms of identifying opportunities for sharing financial resources through a network.

CHAIRPERSON BROMLEY: Good. Thank you very much.

Yes, John.

DR. OGDEN: Like David, I've got this thought that's rattling around in my head from the very clear presentation of Subcommittee 1 and our presentation in Subcommittee 2. It basically deals with the concept of the national system of MPAs versus networks, as defined in Subcommittee 1's presentation. And it strikes me that virtually all of the benefits, as well as the costs, of the national -- of the -- of creating what amounts to under the act a national system of MPAs -- actually fall on the networks or on these regions, as pointed out in Charlie's presentation this morning, because that's where the rubber is hitting

the road, and that's where the benefits are measured and taken.

Somehow -- and maybe I've just sort of gone off the rails -- which does happen from time to time -- but I -- you know, I'm not clear exactly how -- and maybe someone can just sort of help me out here about this idea, because, you know, I think in terms -- certainly in terms of our understanding about how MPAs work scientifically -- you know, we're talking about networks -- the national system is -- and then Bonnie raised the issue of ecosystem management, and clearly our fisheries management is organized ecologically -- so anyway, I'm not sure I'm making any sense, but that's the way it is right now.

CHAIRPERSON BROMLEY: You always make sense, John. It takes the rest of us a day or two to catch up with you. So don't worry about it.

Rod.

DR. FUJITA: Thank you, Mr. Chairman. At the risk of opening Pandora's box --

CHAIRPERSON BROMLEY: Well, then don't.

DR. FUJITA: Well, I really think Subcommittee 2 needs some guidance on this as we go into our next session. We discussed this morning that

there may be a gap in the three subcommittees with respect to precautionary management or developing some guidance for the agencies on what to do when uncertainty exists. So I know that there's mention of adaptive management in a couple of the subcommittee write-ups, and there is a definition of "precautionary management" in Subcommittee 1's footnotes somewhere. But I'm wondering whether the full committee feels it's appropriate for a subcommittee to try to grapple with that, or will it be addressed in some other forum?

CHAIRPERSON BROMLEY: Are there any immediate reactions? And the -- yes, go ahead.

MS. EWEL: I think that would be a useful thing to address, because I noticed especially with Charlie's presentation this morning, looking at all those phases, there's no phase seven, I think, that has that adaptive management step of going back and looking at how successful something has been. When new ecological knowledge or whatever knowledge is gained, how does the whole structure get reevaluated? And that transcends all these levels that we're talking about, I think. So that really is something that we need to grapple with, I think, as a group.

CHAIRPERSON BROMLEY: Good. Thank you.

Steve, and then Lelei.

DR. MURRAY: In listening to the conversations that have transpired here with regard to Subcommittee 1's report and Subcommittee 2, it seems to me that there are two issues that we as a whole group have to get comfortable with to move forward. One of those is the issue of an MMA/MPA. That came up quite a bit with regard to some of the comments that transpired regarding Subcommittee 1. I know that in our subcommittee deliberations, we attempted to come to grips with that at some level, and made a first cut at that, if you will, with regard to some of the definitions and discussions and wording with regard to MPAs. Nevertheless, I think that is something that's going to have to -- we're all going to have to realize where we are with regard to that issue.

The second issue that I think surfaced both in some of the comments with regard to the first and the second subcommittee has to do with how far into the watershed we are going to direct our attention. I think all of us are very concerned and have come to the position of appreciating the need to do whole ecosystem management. But I think we also have to

appreciate that it -- at least I don't see that it's our charge to do coastal ecosystem management. I think we're focusing on one component of that, which is the marine area. Certainly we have to be a little more precise in what our definitions are or what they're not.

We have to, I think, realize how much upstream watershed area are we going to try to get involved with? Tundi brought up the point of ranchers and farmers in the watershed of the Rio Colorado. I think that we can look at this whole process as going quite a bit into the watershed, and, you know, what do we include in our deliberations, and what do we have to say really needs to be addressed with a broader and probably more effective coastal ecosystem management plan of which we're only a part of?

CHAIRPERSON BROMLEY: Good. Thank you, Steve.

I have Lelei, Barbara, George -- and, Jim, do you want to get in here now?

DR. RAY: (No verbal response.)

CHAIRPERSON BROMLEY: Okay. Lelei.

MR. PEAU: Dan, one other thing that I think was suggested earlier, I think the center -- Charlie's

presentation this morning certainly depicts the relationship between group one and what the center is currently working on. I think as far as the next step, we certainly would like to see some guidance or compare notes with the center what efforts, what initiative they're working on that could have -- assist group -- Subcommittee 2 in our efforts.

I think the point that Rod raised that we need to close the gaps between the three working groups, let alone the relationship with the center, I think is something that we certainly need to resolve before we go back to our working group.

CHAIRPERSON BROMLEY: Yes. Okay. I have Barbara, George, Jim and Bonnie. Barbara.

MS. STEVENSON: Okay. To Rod's issue, I know that we disagree on what words you should use. But I think we both agree that you need to have some process that's not totally based on science if you're ever going to have a new MPA. And sort of going back to Subcommittee 1's recommendation, which was rigorous scientific assessment of the proposal, this is a proposal to add it to the system. I think I'm a little confused as to whether they perceive a process where MPAs will be developed as MPAs, and then after a

certain time period, after so much review, they would be added to the system, whereas at least I think some of us thought that there would be MPAs that would be added to fill in gaps to the system directly, you know, and that was essentially the reason that they were being developed. And if so, you need some kind of acknowledgement of some other system other than scientific assessment to devise it. Whether that's in your definition of "adaptive management" -- which I like Subcommittee 2's definition better than Subcommittee 1's -- or whether it's somewhere else, I think is part of what Rod is asking. I think if we extend the discussion of adaptive management, that might be an appropriate place for that discussion. But if we're misperceiving the way that a new MPA would be added, then it's just two different creatures, and they don't have to meet the same standards. So we need a little guidance on that.

CHAIRPERSON BROMLEY: Good. Okay. I have George, Jim, Bob and Charlie. George.

MR. LAPOINTE: My comment was a follow-up to Rod's. I heard him discuss two different ideas. One is -- and Barbara just followed up on it -- adaptive management. I think both subcommittees, in the spirit

of what you said, Mr. Chairman, need to go back and wrestle with those definitions. I don't think they're that far apart, and I think they're trying to say the same thing.

But they also, I think, if I'm not correct (sic), talked about precautionary management -- you know, the precautionary approach. But I don't now how to wrestle with that. But, I mean, those are two separate issues. I'm inclined to leave it out and use the rest of the words. But I think that's something we really need to pay attention to, as well.

CHAIRPERSON BROMLEY: Okay. Jim. Jim Ray.

DR. RAY: I had two comments. I just -- the other comment that Tundi made about the watershed impacts, I think for an MPA program to succeed, there's going to have to be bounds on what we try to set into a system. We can take the extreme example of the hypoxia situation in the Gulf of Mexico. That's a Mississippi watershed. That's all the way up into Minnesota. So are we going to try to manage that under a marine protected area program? I think realistically it falls under other people's purview.

So we've really got to be careful. The same problem happened with, for example, with NOAA and the

Central Fish Habitat, which ends up being the entire EEZ. There is no discrimination. It's the whole thing. So, you know, you begin to wonder what kind of a problem you've got.

Then just one other comment. Again, I think for a system of MPAs to succeed, it has to have some credibility. I think -- you know, I can see in some types of MPAs -- in the cultural and others -- science may not be a driving criteria. But I think in the natural heritage type it has to be a foundation upon which you base the justification for making an MPA. If you don't, anybody can make an MPA for any reason. And if science isn't one of the criteria, I think you're going to lose credibility, and you're going to have a lot of push-back from the various stakeholders groups who might not agree with why you're doing it.

CHAIRPERSON BROMLEY: Thank you, Jim.

Bob Zales.

MR. ZALES: I just want to try to reiterate a little bit on what Steve was saying, and also what Jim just said, because I brought this question up several times in our subcommittee as to -- it's my understanding we're dealing with federal stuff. Lack of coordination with the various states, it could be

that whatever we suggest or try to do with an MPA, if a state's not going to be willing to go along with doing their part of the thing, it ain't gonna work.

This gets into the same deal with going up the Mississippi River. I mean, this has got to be a coordinated effort somewhere in there to make these things work, because it's just like with the FH or anything else, the feds are only going to -- and I doubt they're going to preempt, because I don't know of any case where they've ever done that -- but if they're not going to do something, no matter what recommendation is made for federal waters, you may get some semblance of protection, but without the overall protection of where the problem starts or could've started on up on the beach, or up the river, or wherever it's going to be, it's going to be a useless effort.

CHAIRPERSON BROMLEY: Very nice. Thank you. Charlie Wahle.

DR. WAHLE: Thanks, Dan. I just wanted to begin by thanking both -- all the groups for their contributions. All of this stuff will feed heavily into the framework in our work to come.

There's an idea that's been sort of bouncing

around that's underlying some of these comments, and some explicitly in them. That's one when we started to notice a few months ago. That's that there are kind of two ways of looking at the national system. And my purpose in pointing this out is to give you something to chew on, you know, here in the next month. But one way of looking at it is just simply, if you will, a planning construct, where what we're looking to do in the end is identify conservation priorities for the nation, however they may play out, and by whomever. That takes you down a fairly straightforward -- complicated, I guess, but, you know, doable path of science and stakeholder input.

The other related issue is this idea that it's a club of some kind, that you're either in or you're out, and therefore, the criteria for being in are extremely important maybe. Therefore, incentives and rationale is also important. Those two things are a little different. And as we move forward, it would be good to keep them separate in our minds, that one task that -- the huge task is, how do we identify these priority areas? -- and then somebody will do something about them. The other is, how do we figure out exactly what it means to be in this box we call

the national system? I think maybe if we can keep them separated, it'll help tease out issues like, what's an MMA, and what's an MPA? You know, when we divide that line, we will still be incorporating MMAs into our thinking about priorities for conservation. They just won't be in the box of the national system.

So hopefully that will help us.

CHAIRPERSON BROMLEY: Good. Thanks, Charlie.

Okay. I have Gil, which is the last name on the list, and then it is time for us to break. So, Gil.

MR. RADONSKI: I would just like to address George's comments on adaptive management. George suggested that Subcommittee 1 and 2 look at it. I think the chair should designate one of the committees to flesh this out. If you give it to Subcommittee 2, which we would welcome, we would certainly welcome the input of other people. But having two of the committees deal with one definition is not going to be very productive.

CHAIRPERSON BROMLEY: Consider it so given. It is yours. Do it. Well.

MR. RADONSKI: It will be done well.

CHAIRPERSON BROMLEY: Well, I'm sure it will.

That was unnecessary. Okay. It's yours.

All right. We are two-thirds the way through. Here's the program. You have lunch -- we have lunches outside, I think. Lauren, is that right?

MS. WENZEL: I think they're going to bring it back here.

CHAIRPERSON BROMLEY: Okay. So we have until ten past 12:00. So you have about 18 minutes of break. We will convene back here at ten minutes past 12:00 with your lunch here, and we will have a working lunch, at which time we will hear from Subcommittee 3. They will take us up until one o'clock.

Lauren has one announcement.

MS. WENZEL: I need to call about the field trip this afternoon just to confirm arrangements. If anyone has had any changes in their plans, if they could just seem me now. If you don't, you don't need to see me. Thanks.

CHAIRPERSON BROMLEY: Okay. We'll see you back here in plenary at ten past 12:00.

(Recess from 11:57 a.m., until 12:22 p.m.)

AFTERNOON SESSION

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CHAIRPERSON BROMLEY: Mel, are you ready to go for Subcommittee 3?

MR. MOON: We are Subcommittee 3.

CHAIRPERSON BROMLEY: Okay. We're starting.

MR. MOON: Our topic is intergovernmental coordination, national and regional. We have three documents to share with the committee -- the full committee today.

In the Key Largo FAC meeting, we were able to put together five working groups -- subgroups -- to work on a series of issues. These were smaller

working groups, and for the purposes of fleshing out some issues with regard to the intergovernmental questions.

First off, I'd like to make mention of who is on our committee just for the record. They are myself, Mel Moon, we have Dave Benton, we have Bob Bendick, Eric Gilman, Dan Suman, Jacqui Schafer and Mike Nussman, who is the vice chair, Dave Williams, Ted Thompson and John Halsey. I'd just like to take this time to extend my appreciation for the work that this group has done in developing these papers. Most of our work was done through a series of e-mails and phone calls. We also had a conference call leading up to the final documentation here that's presented today.

I think the main point that we had arrived at in some of our discussions was the fact that intergovernmental coordination is an absolute that is needed for the successful functioning of an MPA, whether that be in regards to the creation of an MPA or the existing MPAs that are here today.

What I'm going to do is I'm going to go through each of these sections that we have. I will cover the first two that will deal with the indigenous

rights and panel planning, as you see in the PowerPoint slide, and the cultural resources definitions. And then we'll move on to Dan Suman, who will provide a PowerPoint presentation on the analysis of the Oceans Commission Report and its relationship to MPA intergovernmental coordination. And then we'll have the intergovernmental coordination as it relates to creation. Then the last will be intergovernmental coordination as it relates to existing documents.

So, first off, we were originally going to have a presentation of and a panel member from tribes. We had an interest in bringing information to the panel about the rights question. This was postponed due to the fact that today we have the Smithsonian American Indian Museum having its grand opening, and a number of the tribal representatives would not be able to attend. So we have chosen to postpone that until the February meeting, which I hope could work into an opportunity for us to be able to connect with the museum and its facilities for -- since we will be in Washington, D.C. in February -- to do a complement there, as well as have our guest speakers talk from that facility.

The other part is that I notice on our

website that we have not a whole lot of information from tribal perspectives on MPAs. I'm hoping that we'll be able to provide more to the website so that people can have information to view about the perspectives of tribes.

In regards to the cultural resources definition, we prepared a -- we had a paper that was presented at the last meeting on historical -- federal registry of the historical sites, and it was provided by John Halsey. We've had a discussion with an ad hoc committee that has been dealing with the cultural resources definition that's been led by Bonnie McCay. Our thought was that the cultural question is much more inclusive than just the traditional indigenous rights question. It's much broader. Perhaps out of the evolution of this, we would be better suited to have the continuation of that committee for the purposes of working with all three subcommittees into the future. So that was our discussion that we had leading to the cultural resources group.

The third item we have is the analysis of the Oceans Commission Report. And I think what I'll do is I'll just have these reports given, and at the end, then we'll take questions for them. So the next

speaker for this will be Dan Suman. I'll let Dan give his presentation.

DR. SUMAN: Thanks very much. And I'll be short because my presentation is factual, and of course you all have my little summary.

But I think that the language in the report is very good for us. It contains a lot of language that the different subcommittees are already using, and that is excellent.

The report -- really the bulk of the report regarding MPAs looks at federal MPA management regimes, I think at chapter four, and chapters four, five and six are the ones that are really crucial for our purposes. It mentions the programs that already exist, Interior's, and of course Commerce programs. The report recommends that simplification occur to reduce duplication, avoid confusion, enhance enforcement, and provide for better stewardship. Of course, one of the guiding principles of all of this should be ecosystem-based management.

Now, if you've read the report, you know that the proposed structure -- management structure will be the National Ocean Council -- NOC. Their leadership will be important in national coordination of MPA

efforts. The commission suggests that the NOC develop national goals and guidelines, and that these guidelines should lead to a uniform process of MPA design and implementation. So the management framework for an MPA system – coordinated system – would be coordinated and spearheaded by the NOC.

The commission recommends that this process use the best available science, monitoring, evaluation and adaptive management in consideration of national interests, which include national security, navigation, recreation and economic development. Sound science, of course, is one of the underlying principles. The report uses this phrase or sentence: "National interests should not be unreasonably limited."

Now, the regional management would occur via proposed ROCs -- regional ocean councils -- whose geographical scope is not defined here. And they would be voluntary and flexible, according to the report. But the report suggests that this will really be the place where stakeholder groups -- regional and local stakeholder groups can interact, through the regional councils, and these ROCs should take the lead in design and implementation of MPAs found in the

regions according to the national principles laid out by the NOC -- by the National Ocean Council.

The goals have to be consistent. The regional goals have to be consistent with the national goals. All the needs -- conservation and restoration needs at the regional level have to be consistent with the national goals.

There are numerous references, of course, in the report to coordination of different federal programs. Not all of them are completely marine, as we've seen this morning, and would not really get into the definition of MPAs. But others are marine and coastal. Included among these are area-based programs. Besides the ones that we always mention, Interior and Commerce, we have National Estuary Program, EPA's program, as well as Fish & Wildlife Service Coastal Program, and the Coastal Barrier Resource System, as well.

The report recommends that this will be in a phase two, perhaps, sometime into the future evolution of NOAA, some kind of consolidation might occur in a revamped NOAA. The report recommends three different stages for NOAA's evolution. Stage two would be consolidation of some of these programs. No dates, of

course, are suggested.

Another area of coordination would be land conservation programs, many of which we already have mentioned today, and in addition, Department of Agriculture's Wetland Research Program, as well as Fish & Wildlife Service National Coastal Wetlands Conservation Grants Program. The report recommends increased funding and coordination with this program and, of course, the coral reef chapter in the report recommends better coordination between Interior and Commerce of U.S. -- of coral reef ecosystems, many of which, of course, are protected as MPAs.

In fisheries -- the chapter on fisheries -- I think it's chapter 19 -- recognizes that MPAs can be important for fisheries management, stock recovery, and prevention habitat damage. Often these benefits occur even though the primary goal is not fisheries management. There is emphasis on the fact that boundaries of MPAs must take into account enforceability, and the report also highlights the need for cooperative enforcement mechanisms which can improve enforcement of these areas -- area-based management.

So in summary, MPAs are useful tools for

ocean and coastal management, and are only one tool, of course, that must be used with other types of management tools and strategies. Much of the content of the report talks about really horizontal integration in this sense, integration between different federal programs, as well as vertical integration, or in other words, intergovernmental coordination between federal government, state government, tribal government, local governments.

Of course, I think one real highlight of the report is that the National Ocean Council should develop these national goals and guidelines leading to a uniform process for MPA designation and implementation.

Now, after hearing especially Subcommittee 1's report today, I'm struck with this idea, well, how does this all fit into what we're doing? Or actually it was Joe -- or, I mean, Charlie -- that really made me think this morning, well, how does what the MPA Center is doing and what we are doing fit into this new structure? I think that's a really good question. But perhaps in the best world, the ideal world, if all of this does happen, all of this new framework for ocean management does occur, is that perhaps the

guidelines that the National Ocean Council might develop could really be the guidelines that the MPA Center recommends and has adopted. They would be, then, NOAA and Department of Commerce's recommendation. Perhaps the National Ocean Council would readily accept those recommendations from the experts that have worked with many different federal agencies and different user groups to reach that conclusion.

Okay. Thank you.

MR. MOON: Thank you, Dan.

Jacqui, do you have something?

MS. SCHAFER: Could you identify --

MALE SPEAKER: Can't hear.

DR. SUMAN: Who would make up the National Ocean Council? Let me see. They're cabinet level people from all or most of the departments that have some jurisdiction over the oceans -- ocean or coastal resources, which -- correct me -- seems like over 10 or 15 cabinet -- or secretaries. And are there others? I can't remember right now without my --

MR. MOON: Actually, I'd like to hold the questions until after the presenters are all done. Write your notes down, and we'll get started on them

after that.

The next speaker is Bob Bendick. He's going to talk about the inter-coordination -- intergovernmental coordination and communications in the management of the MPAs. Bob.

MR. BENDICK: Okay. Thanks. The assignment of this working group really is kind of a subset of Subcommittee 2. It's looking at, in the operation of MPAs, specifically at the issue of intergovernmental coordination. What the group did was sort of put forth a straw man of the attributes of good intergovernmental coordination, and did look at a couple of case studies, the Florida Keys Marine -- National Marine Sanctuary and the Channel Islands National Marine Sanctuary, go through the literature, and then put forward a sort of modified group of attributes. I don't need to go through all those, but there are some overall lessons I think come from all this.

One, as Mel said in the introduction, intergovernmental coordination turns out to be an essential ingredient of the success of operation of MPAs -- or the failure. While there are lots of lessons to be learned from on-the-ground experience

that can greatly improve the performance in this area, the -- what happens on the ground is really a reflection of how the MPAs are created, how the agencies relate to the creation of MPAs, and that basic framework and structure drives cooperation on the ground.

So you really need two ingredients. You need to begin in the right place and involving the right agencies in the right manner. And then you need people on the ground who can implement that involvement in a very persistent and creative way to make it happen.

MR. MOON: All right. Thank you, Bob.

Our next speaker is going to be Dave Benton.

MR. BENTON: Thank you, Mel.

The work group was charged to look at the issues and some of the factors surrounding the creation of a national system, and how intergovernmental coordination should factor into the creation of that system, how it sort of interplays.

We had -- we only had about an hour or an hour and a half of discussion. So we -- it was a conference call -- so we identified what we thought were some of the sort of big-ticket factors and issues

with regard to intergovernmental coordination in the national system. So I'm just going to go through these points really quickly. I apologize that you don't have this handout. Lauren just got my e-mail this morning and was able to print it off. So it'll be distributed to the whole body here a little later on today.

We -- in our discussions it was pretty clear that the executive order specifies that there's no new authorities that are created. What this means is that a designation of management MPAs will be based on existing authorities. Congressional action would be required if you're going to try to create new authority.

The designation and management of individual MPAs will obviously fall under multiple jurisdictions. They will have different and sometimes conflicting mandates and responsibilities. A successful national system will need to recognize and be responsive to the rights, mandates and responsibilities of federal and state agencies, local governments and tribal entities. The national system should strive for consistency and compatibility, while recognizing the wide differences in marine ecosystems, social and economic conditions

and management structures around the nation's coastline. In the end, what this really means is that the national system needs to be structured in such a way and the mechanisms built into it such that it fosters cooperation, forges partnerships at the regional/local level, involves strong stakeholder participation, and creates a climate that allows for reasonable compromise and practical solutions to management issues.

That sort of set the tone for the way we discussed a national system and how you bring these multiple jurisdictions into it. I think -- it's interesting, because this sort of dovetails in with a lot of the discussion we had with regard to the previous two subcommittees, as well as some of the stuff that came out of the Oceans Commission Report. And these are just very preliminary. We haven't had a chance within the full subcommittee even to discuss these. This was in our working group. And we concluded that a regional approach to both designation and management MPAs would be the most successful, and that the national system should be founded on a regional approach, and that that regional approach should be and has to be built around existing

management authorities and jurisdictions.

Within the context of a regional approach, effective coordination at the local level is a fundamental component. It's key to the success of the national system in MPA management. Creating a framework to foster partnerships amongst the management entities is needed.

The framework should provide a transparent decision-making process and provide for rigorous and consistent scientific advice and review. There might be a scientific panel that would be a standing committee that would advise whoever -- however you put this framework together, it could provide consistent scientific advice for management.

It needs to include a mechanism to involve user groups and general public. This means engaging user groups and the public early and often, and has to provide a forum for enforcement, so you have effective cooperation and coordination between the enforcement entities and the regional and local level.

There should be periodic evaluation of the individual MPAs in the regional system. We also discussed the fact that some MPAs -- Lelei will appreciate this -- fall under international

agreements, and that the framework will need to provide a mechanism to continue international cooperation with such MPAs at the regional level or at the local level.

What that all boils down to is more or less a bottoms-up approach as opposed to a top-down approach. In trying to think about ways that you can structure a national system so that cooperation amongst management entities at all the levels that we have them at is a natural outgrowth of the way the structure's put together.

There were some additional issues and considerations that came up that I listed here. One is that the purpose of a national system needs to be clearly articulated. Charlie sort of did that today in his presentation. I think that was a really good start.

The purpose should be explicit regarding the problem the system is trying to solve. The goals of a national system need to be consistent with the purpose and address the problem. Otherwise you're not going to have buy-in from the public, from the user groups, other affected entities.

Numerous MPAs exist under a variety of

federal, state, local and tribal programs. We already had this discussion today. I'm not going to touch on it very much. But how to incorporate those into a national system is a fundamental question. It gets down to the debate we had a little bit earlier. What does that mean? What does that designation mean? What's the carrot, and what's the stick?

We identified one other consideration we haven't talked about around this table very much earlier, and that's funding. Funding for MPA management, scientific programs and enforcement are minimal right now. Funding must be available if a national system is going to succeed. The questions of where that funding comes from, who's going to champion it, are really key to success. It's something that we are going to have to grapple with at some point.

The question was also asked, absent new funding, should any new MPAs be designated, or should a national system be created until we have that funding? How do you make that -- chicken-and-egg question, perhaps.

These are just from an hour and a half phone call. We just came up with this sort of basic outline of things that need to be discussed after that.

There's a lot of work that needs to be done. We're going to work further, I believe, on structure questions, process issues for designation and identification.

One concept that was brought up in our conference call was the nomination process, the possibility of having one. It was sort of interesting that Max brought that up earlier today. We want to work further on mechanisms at both the system-wide level, and then at the individual MPA level to foster the kind of partnership that's going to lead to success given the fact that we're dealing with existing jurisdictions and existing authorities.

That's it, Mel.

MR. MOON: Thank you, Dave. I think as far as the categories that were asked of us for a status of each of these reports, the first report is a work in progress. Obviously, we still need to have the indigenous panel take place. But it was our hope that we would be able to provide some in-depth information at the February meeting with a paper on the subject, final paper to be developed by the June 2005 meeting.

On the ad hoc committee on cultural resources, we are going to defer to that committee to

be on its own -- on its interactiveness with the other three committees, and so we're not necessarily going to deal with that issue unless it comes back to us.

The third issue, on the Oceans Commission Report, is a final document that I think is factual, and so we would submit that as a category B type of proposal.

The fourth paper on the process level for existing MPAs, we believe that that's a final document. That's completed.

The last document actually had a lot more discussions that we felt that, in terms of the order of things, we'd like to move further along with that question. So our sense is that we'll continue to do work on the planning process for the creation of new MPAs.

With that, I would open it up for questions and discussion.

CHAIRPERSON BROMLEY: Before I take hands, could I ask for clarification? Did you say you would have something for introduction at the June 2005 meeting?

MR. MOON: Something --

CHAIRPERSON BROMLEY: One of these -- I think

what I indicated before was that February is the cutoff.

MR. MOON: Oh, okay. I'm speaking of the indigenous paper. That would be available -- would be completed by June of 2005 --

CHAIRPERSON BROMLEY: So this would be a paper upon which we would not need to act. This is just background material; is that right, Mel?

MR. MOON: Right.

CHAIRPERSON BROMLEY: Good. Okay. Thank you.

Okay. We have -- we started a bit late, so we'll give a little more time here. So let's -- John and then Rod.

DR. OGDEN: Thank you, Mel, for an interesting and stimulating presentation in the sense that all these presentations make the point very emphatically, as David did perhaps most emphatically of all, that a national system will be essentially some kind of federation of regional systems, or regional networks, or whatever we want to call them. This is the point that I was trying to make earlier, and that Charlie made during his presentation. It might be helpful, since Brian Melzian pointed out at

the very beginning of our session that the Integrated Ocean Observing System in fact is a national federation of regional associations, and it is in that sense, as David put it, a bottom-up -- very much of a bottom-up stakeholder, in the broad sense, driven process, it is sort of inspired and funded -- inspired in a visionary sense -- and funded top-down. But what happens is going to happen from the ground up. I think there's some interesting things to chew on there.

CHAIRPERSON BROMLEY: Rod.

DR. FUJITA: Thank you, Mr. Chairman. And thanks, Subcommittee 3, for that report.

I think that the executive order has a pretty clear requirement in it for ensuring that agencies that may not have strict jurisdiction over an MPA, but have the capacity of permanent activities that might influence an MPA, that there be some kind of process to ensure that they don't permit activities that negatively impact the MPA. So I'm wondering if your subcommittee has prepared some specific recommendations on what kind of consultation has to occur, under what conditions does a consultation occur, or any other recommendations that you might

offer to guide that process.

CHAIRPERSON BROMLEY: Good. Okay. Yes, Max?

MR. PETERSON: As I understand it, the National Oceans Commission Report is out today -- or yesterday. There's congressional hearings going on on that tomorrow, as I understand it. Congressman Gilchrist is holding a hearing in which he'll deal with a bill by Congressman Thackston to transfer NOAA's -- virtually all of its programs to Interior. I don't know where that's going. Carol Dinkins and I were talking about we can never predict was Congress might do -- (laughter) -- since Senator Hollings is going to leave the Congress, and he's been a long-time advocate of somehow consolidating all these things, depending on where they go.

The point is, I guess, Mr. Chairman, you might need to think about -- I guess you could ask all the subcommittees to look at the report of that and see what relates to them. But at least at this point, I would say that I would not assume that the recommendations of that commission will be adopted in total. It's going to the President, which means all the cabinet are going to look at it. It's going to go to the Hill, where four or five committees are going

to look at it. So I think we can almost guarantee that that commission report will be changed. That doesn't mean we shouldn't look at it. But, I mean, we should not assume that the recommendation of that commission will be somehow adopted in total; for example, this big advisory commission they talk about.

The second thing is I'm troubled about the idea of regional management. The United States is not set up for regional management. There are no administrative regions that can effectively manage things. You go from the federal system to the states. Now, some states have an arrangement between the states, but I was bothered by the one charter that talked about regional management of MPAs. I don't think we're talking about regional management. We might talk about some kind of regional coordination or cooperation. But I don't see in the future any regional management as regions. It might be by cooperators, but not by regions. That's kind of a -- can I put a little realism into it? I don't see anybody creating regions that'll have management responsibility any time soon.

Thank you.

CHAIRPERSON BROMLEY: Okay. Other questions?

MR. BENDICK: Could I just respond? -- let's see -- I guess to Rod's question a little bit -- and look at the sort of existing cases, the inclusion of EPA and a water quality element in the Florida Keys National Marine Sanctuary has been a key factor for success there. They sort of spawned out of the South Florida working group of federal agencies where they're all involved. The Keys National Marine Sanctuary picked that up, and has an unusually broad combination of agencies with defined responsibilities. That has been very successful there in achieving the overall goal.

CHAIRPERSON BROMLEY: Thank you.

Other thoughts, comments? David.

MR. BENDICK: Thank you, Mr. Chairman. I just wanted to respond very briefly to Max. I always listen carefully to Max because of his long experience. And I think he's absolutely correct about the fate of the Oceans Commission Report and its specific recommendations. I think it's useful to look at, but not necessarily something to bind yourself by.

Secondly, the context that we were using, a regional approach for a national system of MPAs, was not to set up regional management bodies that were

independent or anything like that. It was more, if you're going to do a national system, and you're going to try and coordinate amongst existing management entities, don't try to do that at a national level; try and do that at a regional level or a local level. That was what that was about.

MR. PETERSON: Okay. Agreed. I was just reacting the word "regional management."

MR. MOON: Actually, I have another comment on that, too. I think that the context that you were bringing the Oceans Commission Report up as it relates to regional issues, that that was different from the group that was dealing on the preexisting regional development language. Dan, did you have anything to say on that -- on the Oceans Commission Report?

DR. SUMAN: As far as regional? No. The report, though, does recommend that the regional ocean councils that might exist anyway are voluntary, and there's no geographical recommendation for what could possibly be regional ocean councils. But the report does recommend that the regional councils -- let's see -- what's the actual language? -- "coordinate planning and implementation activities of federal agencies with responsibilities at regional level."

So --

CHAIRPERSON BROMLEY: Bonnie.

VICE CHAIRPERSON McCAY: I guess this is both to Max and to Subcommittee 3, and to Dave in particular. About regional, there are regional organizations, such as the Interstate Fisheries Commission, the Atlantic States Marine Fisheries Commission, that your neighbor George is only too -- and of course the Regional Fishery Management Councils. I'm just wondering if Subcommittee 3 has considered either of those or other interstate groups as ways that this regional -- what are the pros and cons? As you know, the Fishery Management Council system is one that's something of an experiment in intergovernmental and stakeholder, et cetera, management on something of an ecological basis. I know the Oceans Commission certainly was looking at it. But I'm just wondering if you thought about it in your appraisal.

CHAIRPERSON BROMLEY: Quick response, and then we have Jacqui and Brian.

MR. BENTON: Bonnie, as I led into my presentation at least, this was from our working group, which was is a sub-subgroup of the

subcommittee. We haven't had a chance to discuss that kind of depth or detail yet. In fact, I'm not sure everybody on the committee would even agree with the idea of a regional approach, not having had a chance to even discuss that.

Certainly there's some models out there, and we can look at those. But we haven't had a chance to do that.

CHAIRPERSON BROMLEY: Okay. Jacqui.

MS. SCHAFER: I thought I was going to have the last comment, since this is something of a matter of levity. I was going to ask Max if he remembered the Ash Commission in the 1970 Executive Reorganization Plan Number 3 that moved NOAA into the brand new U.S. EPA, and where that went.

CHAIRPERSON BROMLEY: Into the brand new U.S. EPA?

MS. SCHAFER: 1970.

CHAIRPERSON BROMLEY: I think it's fitting that we now hear from the old EPA.

MR. PETERSON: I remember a whole bunch of those failed reports. This could be another one. I hope not.

MR. BENTON: The old EPA, which is

continually being reborn as I speak.

DR. MELZIAN: Just points and information which you may find of use -- maybe not -- but I hope so.

One of the models for this National Ocean Council that has been looked at -- and I'm not speaking for this group, just so you're aware -- is the existing National Oceanographic Partnership Program, which consists of 15 federal agencies, such as NOAA, Navy, National Science Foundation, NASA, Corps of Engineers, EPA, Minerals Management Service, Coast Guard, Office of Management and Budget, et al. This program was established by statute, the Defense Authorization Act of 1997. It's actually funded millions of dollars -- maybe some of you here have been funded by that -- since 1997. It's actually the National Oceanographic Partnership Program which is developing this Integrated Ocean Observing System -- before the Ocean Commission was even formed.

So it's just something that's being looked at that this was set up to promote this horizontal communication and vertical communication within the feds, and believe it or not, it's actually working.

Second is that other regions of the country,

including the Northeast, are holding meetings to start developing these regional ocean councils. I attended one at Roger Rawlins (ph) University recently, the Marine Law Symposium. I just let them know that some of these regional associations for the Integrated Ocean Observing System, which are not the regional ocean councils, they are moving well along the way of developing criteria for developing regional associations -- business plans, governance. There's some overlap that may be of use to you.

Finally, regarding the Ocean Commission, by statute it had to be submitted, the final report, to the Congress, and I think two or three congressional committees, as of yesterday. The administration has 90 days to respond to those recommendations. The administration is responding to those comments -- final comments -- some of them by Admiral Loughtonbacher today -- earlier today from NOAA -- by forming the Interagency Ocean Policy Group under the Council on Environmental Quality. That's where EPA, NOAA, all these other agencies I'm talking about are helping the administration respond point-for-point for all the recommendations found in that report.

Thank you.

CHAIRPERSON BROMLEY: Good. Thanks, Brian.

Okay. I have Rod and George, and then maybe we can stop.

DR. FUJITA: Thank you, Mr. Chairman.

I just wanted to strongly support this subcommittee's recommendation that, in general, the approach to MPA development and implementation be bottom-up. I think I understood that correctly. And I'd just note that that's fully consistent with Subcommittee 2's major recommendation, that bottom-up approaches tend to foster stewardship and effectiveness.

I wanted to ask whether they've considered, or maybe they can consider in the future, the implications of the bottom-up approach for the relationship between local, state, regional MPAs to the national system as it evolves. But what I have in mind is sort of anti-backsliding provision. Sometimes when national standards come down from the federal government, there's a perception at least and some activity toward weakening standards at the state level. There's many cases of MPAs that have already been established, such as in the Northwest Hawaiian Islands and elsewhere, where there's very stringent

regulations in place with a primary conservation purpose, that I think should be allowed to stand, and not -- there shouldn't be anything in a national system that would preclude or cause that to backslide.

So my suggestion would be for Subcommittee 3 to try to provide some guidance on that question. What is the relationship between these local, regional and state MPAs and the national system, and what are the implications for that relationship of a bottom-up approach, as we're all recommending?

CHAIRPERSON BROMLEY: Thank you.

George, last word.

MR. LAPOINTE: One is just a comment on procedure. These are relatively new documents. How soon do we want -- it's going to be hard for us to participate in our subcommittees and get comments to Subcommittee 2 and 3 at the same time.

The other one is something I've changed in Maine. We've spent a lot of time on co-management. I've switched bottoms-up to -- because people think it's bottoms-up or tops-down --

CHAIRPERSON BROMLEY: Sounds like a drinking toast.

MR. LAPOINTE: Well, but I've actually

shifted to side-by-side, because it's not one position being superior to the other; it's being a partnership. And I think that's an important thing for people to contemplate.

CHAIRPERSON BROMLEY: Good.

MR. LAPOINTE: As they toast one another.

CHAIRPERSON BROMLEY: All right. Thank you. Okay. Enough on bottoms-up.

Let's think a second about what to do now. We have an hour and a half, until 2:30, to come back here for a panel discussion. Then we have our public comment period. Tomorrow we have subcommittees meeting from 8:00 until 10:00, there's a break, and then we meet again at 10:15. So in a sense, you've got all of tomorrow morning until the lunch period, and then again on Thursday there's some time. The chairs of the subcommittees know because of our conversation the idea of moving as quickly as we can to what I call Category A things, that is, things that are ready for us as a full FAC to consider, Category B things, which are still works in progress.

So I'd like you to sort of, as you go off in your separate subcommittees, to think about where you are in different pieces of your work, that you might

over the course of the next day, get them sort of wrapped up, put aside, move on to other things that are still works in progress, with the idea that perhaps sometime tomorrow, or maybe on Thursday, you might be able to bring some things to us that are ready for deliberation and a decision. And different subcommittees will have different paces and different pieces that they might want to do with that.

So we're going to break now. I will come around to each of the three subcommittees in turn. When I arrive, I'd like to be able to visit with you about the mandate, about what it was that back in November when we met at San Mateo last year that we sort of charged you with doing. I'm going to ask you to bear with me while I run through that so we double-check on where you are with respect to that initial mandate. I will talk to you a little bit about how I think you can bring your reports along.

The third thing, I want to visit with you while I'm there is this coordination between tasks that you are going to do and that you've got to hook up with some other subcommittee, and try to figure out if there's any ambiguity in your mind about who ought to be the lead on which thing, and I'll try to help

you do that.

So you now have until 2:30. When I appear, I'd like to be able to sort of stop what you're doing and have this very brief discussion. I promise not to stay too long. But I do want to go over those three things with each of the subcommittees.

Okay. Mark?

DR. HIXON: Is the intent of our breakouts now for different members of different subcommittees to visit the others and provide feedback and comments on what they've heard so far?

CHAIRPERSON BROMLEY: They could do that if they wish. I think that would depend on where the subcommittees feel they are. Maybe some subcommittees say they don't feel they're ready to do visiting, but they might welcome somebody coming in. So I think that has to be kind of left informal.

DR. HIXON: Because speaking for Subcommittee 1, if there was anyone whose comments we have not yet received, we would love to receive them now so we can start working on them.

CHAIRPERSON BROMLEY: That's right. Thank you. That applies to all three. If some of you have wordsmithing things, or definitional things, or

concept things that you're troubled by, and you didn't get a chance to convey them orally, if you could write them down, hand them to the chair, or if you want to leave your own subcommittee and go into one of the others and make a quick presentation, the idea would be that you don't go in there and engage them in a dialogue or an argument about your position, but that you go and you present it and you get out so that they can go back to work. But if any of you have thoughts that you were not able to convey here, please do that.

Yes, Mel?

MR. MOON: I'm not really certain I'm clear on how we're supposed to receive information on the reports we've submitted and how we -- it doesn't -- I don't see how --

CHAIRPERSON BROMLEY: You're not clear on how you're supposed to receive that information?

MR. MOON: Well, we've presented the reports, as all the committees have, and now we're interested in getting feedback on each of those documents. How do we go about getting that feedback?

CHAIRPERSON BROMLEY: There were some oral comments made here. I assume somebody on your subcommittee was making notes. As I just said, any of

the other members of the FAC who have specific comments for group three, or for any group, that didn't get heard here, should give it to you in writing. The idea is that the groups -- the subcommittees now synthesize, consolidate the reactions they heard, decide which ones they wish to act upon and modify, which ones they wish to refuse or to rebuff, but be prepared to offer reasons why some suggestion made to you doesn't quite seem right. So I think that's where we are, and I think the different subcommittees are in some sense at different stages in the evolution of their work product.

Is that okay, Mel?

MR. MOON: That's fine.

CHAIRPERSON BROMLEY: Other thoughts?

Okay. Let's go. I think you meet in the same venue that you were in this morning. I'll be making the rounds. We should be back here at 2:30 for our panel.

(Whereupon, the above-entitled matter went off the record at 1:11 p.m., and resumed at 2:40 p.m.)

CHAIRPERSON BROMLEY: I'm going to turn it over to Bonnie and let her introduce our speakers and

run the show.

VICE CHAIRPERSON McCAY: Thanks, everybody.

I'm very pleased to introduce you to the panel we have begged to come and talk to us today about culture and the sea from a variety of perspectives. So we're going to have presentations, half an hour each, by Craig Severance, who's a professor in the Department of Anthropology at the University of Hawaii at Hilo. He's going to be talking about MPAs in the Pacific.

Then we have William Aila, who is a fisherman who works mostly along the coast of Oahu. He'll be talking about from his perspective as a fisherman here in Hawaii.

Then finally we have Ed Glazier, a sociologist who works for an organization called Research Assessment. He's going to talk about research methods that are used in working with people who live from the sea, people who are fishing, both in Alaska and Hawaii.

So I'm really pleased that we have this distinguished group of people here. I'm going to ask each one of them to try to respect our time limits, which, unfortunately, frame everything we do. I will

remind you when we get close to your half an hour. But I think that the group would really appreciate having some time to interact with you. So I will remind you when we get to about 20 minutes that we're getting close, and then you can perhaps wind up so that we can talk with you. We will also hope that you could be around a little bit after our session today so that people can talk with you informally.

So we'll start with Craig Severance from the University of Hawaii. Thank you, Craig.

DR. SEVERANCE: Good afternoon. Can you hear me clearly? Okay.

I've got a couple of caveats. Most anthropologists have these. First, there are some Samoans and Hawaiians in the audience who know far more than I do about their own cultures. I hope they'll comment either to factual matters, or even tone, in terms of some of the things I have to say about their cultures.

Secondly, I hope I don't have an admonishing tone. It's not clear to me how familiar all of you are with our Western Pacific Region. But the most common refrain that you hear when federal visitors come out to the region is we're unique, we're island

cultures, we're island-based. We get tired of having to say that all the time. And some of you may be tired of having to hear it all the time. But there's some real truth in it. So I'm going to kind of just bounce around the region really quickly, speak mostly to the indigenous cultures, and some preliminary research that I and others have been involved in looking at issues of the importance of fish and customary distribution of fish to supporting and maintaining culture and cultural identity, and then kind of wrap up with comments on some -- both opportunities to draw from cultural bases and cultural knowledge in the development of MPA, and some challenges in the development of MPA as part of our region, as well.

So I've opened here with a couple of my favorite quotes. "Fish is culture." See, Bonnie, that's the definition you've been struggling for.

VICE CHAIRPERSON McCAY: Thank you.

DR. SEVERANCE: Right. It's very hard to operationalize that definition, but it really relates to a central focus in American Samoa of the idea that fish, particularly the distribution of fish and the sharing of fish, including the ceremonial distribution

of fish, is really central to the maintenance of Fa'a Samoa and Samoan culture.

The second one comes from the cultural side. I think that applies to all parts of the region, including Hawaii, especially with native Hawaiians. When you need fish for a ceremony or an event, that's when you go fishing, which means you need to have a sustainable fishery, that you need to have access both at predictable times for some kinds of ceremonies, and at unpredictable times for other kinds of ceremonies.

Now, I think all of you know this, but American Samoa is an unincorporated territory. The Samoans are in a clear political and populational majority. They do control things. It's very important for them to be able to continue to control things.

Guam's a territory, too. While the Chamorro population hovers around 50 percent with all the other immigrants and military population, the Chamorro power base is well-entrenched in the government of Guam, and it has a lot of influence, which means that it and native rights associated with Chamorro custom really have to be considered whenever you're engaged in federal activities in the territory.

In CNMI, the Chamorro are a political majority. They're not a populational majority. There are lots of other populations there, including Carolinians, who have a long-term cultural history. They have ties to the Carolinian Atolls in central Micronesia. They, as well as long-term Chamorro fishermen, have a knowledge base and an understanding of environmental processes in their environments, et cetera.

There are also immigrants, including guest workers, who have a fairly high demand for fish if they can get it cheaply. All of those populations need to be considered.

In the territories, and even in the commonwealth, not all U.S. laws necessarily apply. Sometimes it's a contentious issue as to what should apply and what shouldn't. In Hawaii, while we're a state, and all U.S. laws do apply, there's plenty of statutory recognition of Hawaiian rights. Hawaiian native rights activism is on the increase. I project it to become louder, more effective. And while there have been some legal challenges to it recently based upon constitutional things having to do with equality and equal rights, it's something to watch and to

participate in. Because, again, Hawaiian culture has a knowledge base that is perhaps critically useful in MPA design and development.

In American Samoa, Samoan custom is alive and well. Generally speaking, land is still in communal tenure. Reef flats are under village title and control. Villages do monitor their reefs. Later on, I understand you'll hear a bit about the new community-based fishery management program at the village level from Finny Itaoto.

Two key words up there -- "tautai." A tautai is a master fisherman, someone who is knowledgeable about the resource, knowledgeable about fish behavior. Every higher chief has tautai under him because he needs fish for fish distribution. That fish distribution comes through "tautua," or service. The untitled men service the chiefs and matai, and chiefs with matai titles may also service higher chiefs. There's a famous Samoan expression -- the road to title is through service. But Samoa's really different than any place in the U.S., mainly in terms of communal land tenure, communal organization, chiefly authority and chiefly control. And if you want to work effectively in American Samoa, you have

to understand that and respect it.

There are important customary obligations for fish distribution. These relate to cultural demands and the importance of maintaining cultural identity. The next couple things I'm going to show you have to do with some research that's been done in Guam by Rubinstein & Pinhey, some research that's been done in American Samoa and in CNMI coordinated by Mike Hamnet, whom I presume many of you know, and coordinated very effectively in American Samoa by Finny Itaoto, who was our local representative down there on that particular project.

It is possible to do survey work. You've got to have your institutional review board approve your surveys. They've got to be written in both languages. You've got to have local people working with you to get people to participate in filling out surveys, et cetera.

Here's some data that relates to dividing up reported catch into sold and unsold portions, and then how the unsold portion is divided up. These are important customary distributions for the unsold portion of the catch. From this sample, which was kind of a snowball availability sample, but covered

many of the active fishermen in Tutuila and some in Manua, as well.

To'onai, that's a Sunday afternoon service in the village after church. The untitled men serve their chiefs, and they serve their chiefs with fish. So it's important to have fish, and therefore, it's important for a village to have at least one tautai, hopefully at least one alia, or access to alia fishermen living in other villages. And an alia is a particular type of Samoan vessel. I have a slide of one later on so you can get a feel for what that is.

Any number of contributions from the people surveyed give fish 22 times a year to to'onai. That's what we mean by “effort comes from the cultural side.” Cultural demands stimulate effort. To protect the continuity and value of those cultural demands, you need to have a well-sustained fishery, and you need to have regular access to fish.

Tautua, or service to the matai, 19 percent reported giving half or more of their unsold catch in tautua.

"Fa'alavelave" is a bit of a contentious term in Samoa. It relates to obligations within your kin group to participate and share in various kinds of

ceremonies. If you want an operating definition, I'd prefer to defer it to Lelei or to Mamele. But 42 percent of the fishermen sampled report giving fish as fa'alavelave. That's an important thing that people use to maintain their customary obligations to each other and to contribute to the solidarity of the aiga, which is a kind of bilateral, unrestricted dissent group that has communal titled land under the chiefly title, and supports every member of the aiga by cooperative work together. It's quite different than the kinds of individualistic values you might find in some other communities.

"Fesoasoani" -- that's sort of giving fish in helping friends, et cetera. Some fish can be sold at a lesser price under such a category. At certain critical ceremonials -- and this is from some earlier work in American Samoa -- you can still see customary distribution where fish are cut and formally distributed. This may be at title investitures for chiefs. It may be at the one-year lifting of the closure around a grave site after a funeral, other kinds of customary obligations. You need the fish. The fish become symbolic. They flow into customary exchange and distribution, and they support the

cultural continuity of Fa'a Samoa.

So the top one in here is skipjack, but these others are reef fish, including some of the deep slope and shallow slope snappers. So again, customary distribution.

So in American Samoa, it's critical to understand the timing of fresh fish needs. I would argue that MPA can only be developed when you have full community and chiefly support, consultation, input, and that local access to fish perhaps in zones between linked smaller MPA is critically important for maintaining the culture.

There's a strong community knowledge base. There's a lot of environmental knowledge about fish behavior, spawning times, spawning sites, all of that kind of stuff. Speaking as an anthropologist, there are few marine scientists who take advantage of that knowledge. There are many marine scientists who tend to ignore it as a kind of folk knowledge. It can be part of the valuable knowledge base you need to properly site MPA.

So you've got opportunities in American Samoa. Networks of small linked and community-designed, community-controlled MPAs will probably

work. Large-scale marine reserves will probably be very strongly resisted, the kind of backsliding that Rod mentioned this morning.

There is the issue of no-take areas versus the importance of having fish when you need them for cultural needs. One of the challenges, of course, is that Samoans have been -- and this is, of course, speaking as an outsider -- Samoans have a long history of buffering Fa'a Samoa from various kinds of federal impositions. Once you're successful at that, you can continue to be successful at that, having that knowledge and experience.

So let's go on to Guam and the CNMI. There, fresh fish are very important for fiestas, their cultural needs for fiestas -- the annual village fiestas for the patron saint of the village. There are various kinds of family ceremonies -- baptismals, weddings, funerals -- all of these there's a preference for fresh local reef fish. If necessary, they'll use imported fish, but they much prefer to have fresh local reef fish.

A short baseline socio-cultural survey on Guam done by Rubinstein & Pinhey -- fairly good sample size -- over half the Chamorros in the sample give

fish to fiestas. They're more likely to give fish to fiestas the longer they live in a particular village because the fiesta is part of the social fabric, of the continuity of the community, and fish are a necessary ingredient in fiestas.

CNMI -- smaller sample -- largely Chamorro and Carolinian. Sixty-five percent of the fishermen give fish to family events, community events, et cetera. So village fiestas are important, and when fiestas happen, you need access to fish.

Okay. From Hawaii, William's going to speak more about that. But this is basically based upon some recent work we've been doing with three generations of a Hawaiian family in lower Puna in Hawaii, filming narrative of cultural values, resurrecting some traditional techniques, and things like that. The key idea is you don't waste food. Food looks back at you if you waste it. So you don't take more than you need.

Another key idea which creates some enforcement difficulties is you only fish in your own area. You don't fish in other people's areas. The problem, of course, you have is with outsiders. There have been some Hawaiians in lower Puna recently

reasserting the idea that this is a Hawaiian place, please respect it, and a couple of them have been physically threatened by fishermen who have a different kind of attitude. So that's one of the things you need to sort of deal with.

So in conclusion, for MPA development, I'd suggest that it should be island culture centered, and not island culture bound. It's still kind of a fuzzy concept. It's a little difficult to operationalize. But if you were to compare things in Samoa, where there's a great deal of cultural strength, there are not many outsiders. When there are outsiders in the village, they're largely incorporated into the village. You have a traditional and customary knowledge base upon which to build fairly directly.

In the other areas you have conflict and competition with various kinds of immigrants and different kinds of culture. So you need to be flexible. And the way to be flexible is to take the basic values from the culture, recognize the importance of fish to the culture, and build on that, rather than bringing in models from the outside.

So obviously, from a social science perspective, you need to do your socioeconomic

baselines and cultural baselines early. You need to use culturally appropriate methodologies. Using local resource people can be very helpful. In our CNMI and Samoan work, we were very lucky to be able to use funds through the Research Corporation of the University of Hawaii to pay members of the existing Division of Fish & Wildlife, et cetera, overtime, because they were the ones who had the contacts with the fishermen. They were the ones who had the knowledge. They were the ones who were able to find the people for us to interview, find the people for us to survey, and to do it fairly quickly and effectively. Of course, in doing that, you've got to show respect and sensitivity.

So just to recap, there are cultural needs and demands for fresh local fish. These are periodic and not always predictable, but they're culturally important. These customary and ceremonial distribution of fish at fiestas, and among Chamorros at various important ceremonies of their part of Fa'a Samoa, they help maintain the social fabric of the communities. If you can work in ways that help perpetuate them, you are supporting the indigenous communities. If you work in ways that work against

them, you're going to be up against cultures of resistance. So, obviously, the key is adaptive management and flexibility.

I think I'm out of time. I had seven or eight slides, but we can skip them and move on to the next speaker, unless you want.

VICE CHAIRPERSON McCAY: Thank you very much, Craig. That was a great introduction.

(Applause.)

VICE CHAIRPERSON McCAY: We have a few minutes for discussion and for questions.

Yes.

DR. PEREYRA: Yes. Wally Pereyra from the Pacific Northwest. I'm curious -- how is the issue of resource depletion handled or addressed within the context of the island cultural needs and values and so forth?

DR. SEVERANCE: That depends where it's happening. It's happened to various degrees in all of the places. It's an issue of central concern. In terms of how it is dealt with, I think you're going to hear about the community-based fishery management program in Samoa later on. There, villages have quite a bit of say about who gets to use their reefs. And

while there has been some contention and conflict over nighttime scuba diving with people from outside the village, including some people who are resident Samoan, but are "Tongans" as opposed to Samoans, that's come largely under control both by the assertion of village control and by government regulation.

In the other parts of the region, it's still an issue of concern. People are looking at MPAs as part of their responses. I'm sure many of you here know more about the details of that than I do.

Anything else?

VICE CHAIRPERSON McCAY: If not, then we can move on, and then we'll have more discussion later on.

William Aila will now talk based upon his experiences and observations as an active fisherman.

MR. AILA: Actually, before that, I was looking at the agenda, and I don't think anybody's had a traditional Hawaiian welcome. So if you'd permit me, I'll do an Oli Aloha.

(Sings in Hawaiian.)

MR. AILA: Now you've been officially welcomed.

(Applause.)

MR. AILA: (Speaks in Hawaiian.) My name is William Aila. I'm a fisherman from the west side of the Island of Oahu. There are many things that Wai'anae, the area that I proudly call my home, are famous for. The name itself, Wai'anae -- "wai" meaning water, and "anae" being the designation or the Hawaiian term of reference for large mullet -- refers to ancient times, the productivity of the dry side of the island in a time where climatically there probably was a lot more fresh water flowing into the streams. There certainly were a lot more estuaries, which resulted in this very famous name being given to this area, because of the large mullet that was known to frequent that area.

Wai'anae is also famous for having large ahi. Every year, many, many tournaments -- fishing tournaments -- recreational fishing tournaments -- probably why people visit our west shores and participate in tournaments. In fact, the largest tournament in the State of Hawaii occurs out of Wai'anae, and at its peak, 260 vessels participate.

Wai'anae is also famous in terms of recreational fishing for being the place where the largest blue marlin, or the largest marlin, period,

has ever been caught on a rod and reel, and that was an 1800-plus-pound marlin caught three miles off of Maka'a surfing beach.

The other thing I'm especially proud of where I come from is we are a fiercely independent people, even until today. We don't oftentimes consider ourselves as part of the rest of the Island of Oahu.

I'm here to talk about fishing culture and culture in relation to possible considerations for Marine Protected Areas. In doing so, there's sort of the hierarchy -- the chiefly hierarchy that sort of flows through Hawaiian culture. But I'd like to talk about it at the ground level.

The most important person at the ground level in Hawaiian culture, especially in days of old, and to a certain extent in some rural areas there still exists a thing or a person called a lawai'a po'o, or a head fisherman. Such a designation was very, very special, and bestowed a lot of status upon this person, because to achieve the status of a lawai'a po'o, it involved a lifetime of learning under the study of other lawai'a po'o or kapuna. Often you dared not accept the title, and you dare not speak of yourself as one who's attained that status until

you're well above your middle-age years, unless you're a very special person who was pulled out at a very young age and put on the side, and this became your identity, and you were trained.

To be a lawai'a po'o meant that you were proficient and had attained an intimate knowledge of weather patterns and cycles. How you would be measured is that you would know the time of year that the wind shifted, and about what time of the year the wind would shift and go from trade winds to southern winds, or Kona breezes, as we call them here, and their effects -- their effects on the shoreline, their effects on offshore fishing.

You would have attained an intimate knowledge of weather patterns and wave patterns. You would know that swells coming from the north-northwest have a different effect on the shoreline than swells arriving from the south. And you would know that these waves would move the sand. You're all here in Hawaii right now at a period where we're in transition from sort of fall to winter. Soon, because of the large northwest swells, a lot of the sand that you see on the beaches, not particularly on this side because you're protected, but on the west- and north-facing beaches,

are going to be pulled far out to sea because of the large northwest swells with their very short periods. So it grabs the sand, takes them out, deposits them in the near-shore waters, covering up some fishing holes, opening up some others. Fishermen fishing for Kona crab knew this and knew where to change the areas that they fished.

Being a lawai'a po'o means that you understood the currents and the tides and the moon phases. It was understanding that these factors meant that, if you understood them, you wouldn't have to waste your time. The currents -- you would know what time of the day and what direction the current was going to flow so that you didn't waste your time putting your net out there because it would lay down sideways and not have any effect, because the current was too strong.

A prime example of this is an uncle of mine once invited me to a fishing trip. We call it a "holoholo" here in Hawaii. I arrived early in the morning, had my gear ready to roll, and waited patiently for about four hours in his yard. My impatience began to show, and I said, well, are we going or aren't we going. And he said a very simple

thing to me. Why would we go if the fish aren't home? And he knew the fish wouldn't be home because the current was going the wrong way, and the current was too strong, and we had to wait for that to change.

So it's important to understand the cultural knowledge that was spoken of earlier. They also know -- the lawai'a po'o also understood that. You never go fishing in a slack tide, because in a slack tide, the fish aren't doing anything. They're just waiting for the current to begin.

I've seen predators swim with prey at slack tides. But as soon as that tide changes, the prey knew what was going to happen, and they all disappear. Then every time you threw one of those baits in the water, a predator was there. So knowing these -- having intimate knowledge of these things was very important.

You would know the settlement times of juvenile fish, like hulla lu, oama -- Oama being goldfish and others.

Being a lawai'a po'o also meant that you exhibited the proper behavior. Sharing was very, very important. As you can see in many of the Polynesian cultures, sharing is the number one measurement by

which a fisherman is measured.

I have an uncle who used to always complain to me that when he went fishing with my great grandfather, they would fill up the boat -- actually, they would fill up the canoe, because they were fishing in canoes at that time. But at the beach -- each house along the way, he would stop and he would distribute fish, returning home with just a few fish to eat. My great grandfather would tell him to kuli-kuli, which is to be quiet. The message there was -- there was no further explanation. The message there was -- is that the 'ike, or the knowledge, of fishing and fisherman behavior comes not from being told what to do, but comes from the doing. So by doing it over and over again, he finally figured it out, that the reason they went fishing was to supply all of the folks along the path on their way home with fish.

There's also -- people are afraid of speaking of this nowadays. But there's also -- the lawai'a po'o had an intimate understanding of the spiritual side of fishing. And there is a spiritual side to fishing, especially if you fish in Hawaii. It starts with asking for permission. It continues with the proper offerings, both before going and after

returning. And above all, the lawai'a po'o exhibited kuleana, or responsibility, to take care of, because there was no such thing as rights. There were only responsibilities.

Fishermen of those times were very, very well-respected people in old Hawaii.

What kind of protected areas existed? Well, the ali'i, of course, they had privilege, and they had their special areas that had the fattest fish, the biggest fish, and so those areas were off-limits to most of the common people. Some examples of these areas would be fish ponds, sections of the near-shore areas, offshore ko'a, or places where large fish, pelagic fish gather. Those are some of the areas.

The next level of protected areas would be managed by a person appointed by one of those chiefs called a konahiki. A konahiki was usually a lesser chief, or sometimes a lawai'a po'o, a head fisherman. He oversaw the area on behalf of the ruling chief. And the ruling chief ruled on behalf of the benefit of the people. So there was that reciprocal relationship. It wasn't just for the benefit of the ruling chief, because we have many examples in Hawaiian history of a ruling chief whose head got too

big for his people, and had his head removed.

Being a Konahiki meant that you possessed an intimate knowledge of the area -- the local area. He knew that there was this mauka -- "mountain" -- makai -- "ocean" -- relationship, and that the earthen -- the sand-backed ponds, called muliwai, were to be harvested before the heavy rains came during winter. These naturally occurring ponds sort of acted as fish ponds where people would go and harvest juvenile fish, stock those ponds, and when the weather started -- before the weather started to get bad, they would have sort of a refrigerator to open and go to.

That konahiki also understood that there were in-shore and offshore linkages. For example, that the juvenile states of some of the goldfish, or what we call oama or veke here, and surgeonfish -- some of the pulanis, the foalas, the mani'i, have a pelagic state. And in that pelagic state, they play a very important role to the large pelagic species. They became food for the big yellowfin tuna that's very important to the area that I come from. And they understood this.

The konahikis monitored that area or the area that was assigned to them on a daily basis. How many of you fisheries manager type people in here would

kill for some real-time data? Okay. The konahiki had the real-time data, because he either had somebody in the water doing it, or he was in the water himself doing it.

They also monitored the area on a seasonal basis observing recruitment and larval settlement to forecast what kind of resources would be available in the future.

Then you had another layer of protected areas called an ahupua'a. An ahupua'a is a land division normally from the top of a mountain range to a distance offshore, usually a valley. So it's a triangular shaped piece of property in which villages resided. This became what you call a complex management unit area. Residents of one ahupua'a would respect and refrain from taking the resources of another ahupua'a, unless something very unpredictable, such as a natural disaster or something, were to occur. The penalty for violating that sort of understanding, that kanawai, that law, brought shame to the residents of that ahupua'a. And there's nothing more effective than shame to keep people in line.

Because of cultural restrictions and the

emphasis on kuleana, then the mauka-makai ecosystems were able to support a large Hawaiian population and allow for the refinements of fishing techniques in Hawaii to such high levels; for example, training opello to actually swim into a net so that you can pull them up to the surface. The term "hukilau," which I'm sure some of you may see in the next couple of days while you're here, which refers to the pulling of a large line with tea leaves on top of it, and the older name for "hukilau" is called lauluma, which means to pull the lau. Okay. Hawaiians evolved to have bamboo spreader rigs to allow for multiple leaders on multiple hooks for deep-sea bottom fishing.

Because of this clear understanding of kuleana, there was no need for marine protected areas. So what went wrong? Kamehameha III, from the 1840s to the 1860s, was convinced by his advisors to change the title of land ownership, where it went from allodial system, in other words, where all the land was held in trust by the king, or the mo'i, and after that mo'i died, it would be redistributed by the next ruling person, to one of where private property or fee simple property became the norm.

Konahiki fishing then became privately held.

When Queen Mekolani ceded the sovereignty of Hawaii to the United States until an investigation of the illegal overthrow occurred, and President Cleveland was in negotiations with Queen Mekolani to restore sovereignty, one thing happened. He lost the election. President McKinley came in and saw the need for Hawaii, and chose several different avenues to try to annex Hawaii from the constitutionally correct posture, which it failed, which is why Hawaiians are asserting a bigger role in management today, and will assert larger roles in the near future.

That led to the Territory of Hawaii coming into being. In the 1920s, the Territory of Hawaii passed a law that every konahiki needed to register his or her claim. Failure to do so within a two-year time frame meant that your authority to exert fisheries management authority over that area would cease to be.

This was done because -- or for the purpose of "public purposes" to make the ocean free for all. Okay. So after about 1924, any konahikis that weren't registered were lost to the territorial government. Some people still had them.

From about the '20s through the '50s, the

territorial government of Hawaii had an active policy of condemnation of these fisheries management regimes to bring and make consistent fisheries policies throughout the Territory of Hawaii. The State of Hawaii has since continued that policy of condemnation and purchasing of these konahikis, so that the fisheries can be free for all.

What happens when you make the fisheries free for all? Well, something that's free has no value, and something that's free is often abused. That leads us to where we are today here in Hawaii.

What can we do? My recommendation is that there be a concerted effort to assess each ecosystem type within the geographical area of Hawaii. For example, there are some sand areas, there are some flat-bottom areas, there are some areas with high relief, there are some mud flats. So there needs to be an assessment of the characteristics of each area, and then special areas and unique areas can be identified. These special areas and unique areas should become the candidates to be protected first.

What is critical in any future discussion of MPAs in Hawaii is that you have to bring in the fishermen and the other users from the very beginning

of the process. You have to make management of a proposed MPA flexible to reflect each community's unique geographical character, because some places, like the coastline in the Miloli'i have very different ecosystems than where I come from in Wai'anae. So it's got to be flexible enough to be adaptable.

The community has to have co-management responsibility, or kuleana, or else MPAs will not receive authorization and will not succeed in the long-run. You have to identify Hawaiian families who have traditionally cared for these areas, and you have to invite them and actually make them a part of the administration of these MPAs, because who better qualified than someone who has had 100 or 200 years of responsibility for managing a particular area? Then you can tap into that cultural knowledge, that indigenous knowledge, that was discussed earlier. You can have buy-in from the people who will be managing it, and you will have a successful MPA.

And finally -- this comes as a surprise to no one here -- don't expect overnight results. This is a complex issue biologically, a complex issue politically, and in Hawaii especially, a complex issue legally, because there are state-guaranteed -- I hate

to call them rights -- they're more responsibilities -- for native Hawaiians within the state constitution. And in the near future, there's expected to be some form of federal recognition which will codify at the federal level some sort of responsibility on the part of native Hawaiians. And remember that MPAs are a tool that can be properly applied only if carefully forged, with input from indigenous peoples, fishermen, and other ocean users, and that communities that encompass them are in favor of. The application of this tool only works if we're all pulling in the same direction.

Thank you very much.

VICE CHAIRPERSON McCAY: Thank you.

(Applause.)

VICE CHAIRPERSON McCAY: I can't help but remark on the kind of sad irony/tragedy that through -- perhaps through what we're calling MPAs, we're trying to make up for what Hugo Grotius did on behalf of the Dutch East Indies Company a long time ago -- you know, this long process of dismantling the traditions, the structures, the political structures, the customs that did provide some kind of area-based management for and incentives for stewardship of

marine resources.

Thank you very much.

So now Ed Glazier's going to speak to us about methods -- social research methods.

CHAIRPERSON BROMLEY: Did anybody have a question for William while I kind of --

VICE CHAIRPERSON McCAY: I'm sorry. I was rushing things along because I'm concerned. I'm very sorry. Yes, open up for questions. I'm mixing my roles as timekeeper with that of facilitator.

Yes. Okay, John.

DR. OGDEN: Thanks very much for a very interesting presentation. I'm really interested in your comments about the hupuah -- I haven't said that right -- but this idea that the land is linked to the sea. This has come up in our discussions. In your opinion, and based on the traditional knowledge of the Hawaiians in managing ocean resources, is this kind of a link essential? I'd just like you to talk a little bit more about that link between the land and the sea.

MR. AILA: I firmly believe that the link is essential in any kind of restorative actions that are taken and any kind of future protections that go in, because, for example, where I grew up, when I was a

young man, approximately three miles from the ocean and right at the base of one of our mountains was one of the greatest estuaries that ever occurred on the leeward coast. Public policy 30 years ago was, what are we going to do with that swamp? So the city government at that time chose to fill it up and make a garbage dump out of it.

As a result, the amount of fish that are estuan in nature along the Wai'anae coast have declined simply because we destroyed a huge part of their habitat. A huge housing complex in Maili that encompasses, oh, close to about 700 acres right now was built on estuary. A result is that fishermen get the blame for a reduction in all of these species like mullet, like milkfish, awa'a. But in reality, it was the degradation, or actually the destruction, of those estuaries that caused the great reduction in fisheries resources.

A particular troubling consequence of population growth where I come from right now is that many of the streams have been tapped back at the mountain. Many of the springs that were fed by volcanic dikes have been capped and tapped at the mountain. So many of our streams no longer flow

perennially. As a result, many of the native species cannot make their way back upstream in order to reproduce, so we've lost some of them.

So it is this recognition of this mauka-makai connection that is essential for understanding even the basic fertilization of the near-shore waters so that some of our seaweeds -- we call them "limu" in Hawaii -- can grow. And in fact, because the streams no longer flow, nutrients no longer come down from the mountains. So the seaweeds that are prized by native Hawaiians for garnishing certain dishes no longer exist. It's not because we picked them all. It's because the environment that they used to occur in no longer exists.

Thank you.

VICE CHAIRPERSON McCAY: Thank you. We will have to move on to Ed now. Thank you.

MR. GLAZIER: I need to preface this discussion like Craig did, because I'm speaking from sort of a research perspective, and a fairly antiseptic one. But none of this research that I'm going to talk about can be done without proper interaction with fishermen and cultural experts anywhere, in the islands especially.

So having said that, I'm going to talk a little bit about accessing culture with social research methods. My name is Edward Glazier. I'm a graduate from UH -- University of Hawaii -- in sociology, and I did my work over on the Wai'anae side of the island, thanks in part to William's introduction of some of my -- some of the folks I work with -- really helped me out.

I work for a company called Impact Assessment. We do social science research. We do a lot of fisheries research around the country and a lot of work with offshore oil drilling in interaction with fisheries in Alaska. We currently have a lot of work now with the National Marine Fisheries Service.

I want to talk a little bit about culture and looking at culture as a social system, a system of people interacting with each other. Then I'll talk a little bit about how to -- at least one way to access societies of marine resource user groups, and to get down to the level of understanding cultural nuance in terms of interacting with marine environment. Then I have a couple of examples and some maps, and I have some pictures interspersed here from my work in Hawaii. So I hope they'll be interesting to you.

Just a bit about culture, kind of stepping back from the discussion of Hawaiian culture and Samoan culture a little bit, but culture as a whole. It essentially describes patterned human behavior and ideas. It's a people-based process. Members of cultural groups share beliefs, language, customs.

In modern days, situations with popular media, things are both complex and changeable. But again, culture is people-based. As I have here, you can't think of Annukia culture without real modern eskimos interacting in a mutually recognizable way that is mutually considered Annukia. It's tough to see our own culture at times and how it limits our ability to see how others interact. I think that's the relevance here. So it's the job of social science to communicate how other cultures work, relationships of cultural groups with their natural world, and in the bigger economic picture.

There can be some really fundamental differences between the way people view the world -- perspectives on time. I think the native Hawaiian respect for the kahuna and heeding the past and the lessons of the past is something that is really deeply ingrained in that society, and it's hard to see, at

least from the culture that I was raised in.

But it's clear -- if you analyze fishing around the islands, it's clear that people are still interacting with the past. This is a fishing shrine on Ka Lae on the south coast of Hawaii Island, the Big Island. You can see there's a modern --

CHAIRPERSON BROMLEY: Can you put the microphone --

MR. GLAZIER: Oh, I'm sorry. Yeah.

CHAIRPERSON BROMLEY: Thank you.

MR. GLAZIER: Sorry. This is a prayer bundle that I found up on Kaena Point with a nice prayer -- a little written prayer inside of it to the God of Ocean. So there's still a lot of attention to the past clearly.

In reality, all maritime social history is rooted in the pursuit and consumption of seafood. The ideas of fishing for recreation and ecotourism, these are fairly new concepts in the course of history. Island societies are really deeply involved in fishing for food, marine resources as food, and the culture of the practice of fishing that surrounds that.

That's not to say that there isn't some commerce involved. In fact, we're seeing in a lot of

parts of the world where indigenous peoples are fishing -- their involvement in commercial fisheries can actually feed into subsistence and consumptive fishing. The place and the practice of fishing in pursuit of marine resources is critical in organizing indigenous societies and their families and communities.

This is a shot from the Kona Coast on the Big Island again, a really interesting place.

Just to sort of reiterate, localized knowledge of ocean resources is critical in local society. I heard someone talk earlier about TEK, traditional ecological knowledge. A lot of folks are studying that around the country now.

The resource itself is both food, and it's money, and it extends well beyond that, as Craig indicated in his discussion of sharing and celebrations -- use of fish in celebrations.

An important point that William clearly made was that this long history of native Hawaiian life around the ocean, and the emphasis on the past, I would assert, has led to -- historically led to local management systems. In short, communities can be imbedded in resource use. That can't be over-

emphasized in Hawaii.

Of course, now there's increasing differences in the kinds of uses of marine resource areas. What can be confidently predicted is that, given this imbeddedness, any imposition or perceived imposition of regulations from the top down is likely to create some challenges.

This is a shot of some folks over on Maka'a, the Wai'anae side of Oahu. It was that year that the first big ahi that came in, and folks are dividing it up for sharing in the community. Folks are all about the ocean on this side of the island -- and on other sides, of course.

My perspective in all of this is from a sort of consultant perspective, where I typically work on projects that would help government agencies satisfy their information needs under various -- underneath the Magnuson Act, Outer Continental Shelf Lands Act, Environmental Justice. So the kind of information that we tend to generate in our research is somewhat -- it's a little bit different than directly involving stakeholders, but as an objective enterprise, I think the kind of work we do can help identify stakeholder groups, and that's kind of what

I'm talking about today.

So our mission as researchers are to identify the groups and what they do -- when, where, how -- and communicate that with the intent, in a lot of cases, of trying to understand how these groups could be affected by regulatory change. Again, this kind of stuff could be very useful for stakeholder planning purposes.

So the rationale for cultural analysis is pretty straightforward. Culture is people-based. People can be observed and queried, and thus culture can be systematically described and explained. And this can be applied to analysis of marine resource use. So in the case of MPA analysis, we can understand which groups use areas, how they value the resources, et cetera.

We've been sort of pushing in our own work a systems approach to understanding culture -- pretty straightforward -- identify the systems -- the social systems of users, conduct research to understand and describe what's going on, and then -- I believe this is very applicable to MPA analysis -- the first step we usually take is literature review of pertinent information.

I just wanted to let folks know who haven't seen it, there's a group on the Big Island, Kumu Pono, that has done an amazing job of documenting Hawaiian fishing history. If you get a chance to have a look at that -- it may be fairly restricted in distribution, but I think it will surface in the upcoming years. It was just completed.

We also tend to analyze fisheries data and reports in that initial phase. Discussions and interaction with council folks, NOAA fisheries folks, and people in state government who are responsible for fishing -- "hui" is a term for organizations -- so fishing hui in the islands and known experts.

My emphasis here is on understanding social networks of users -- user groups, from which subsequent in-depth research can be conducted. I just wanted to walk through how that works. So we're thinking of culture as a network of people interacting, in this case, in a marine environment. The intent of the social network methodology that I'll show you -- is to identify highly knowledgeable resource users of -- I guess we could think of them as lawai'a po'o in that we're asking folks to tell us who the most expert, in this case, fishermen, are -- or

fishers -- based -- so it's sort of a measure of a chief's status in the fishery -- a given fishery, where the central actors in the network can speak to -- speak with expertise on fishing culture and the use of the marine environment and the potential effects of regulatory change by asking the simple question of people, who is the most knowledgeable of or experienced with this place or gear or species?

This is an example of -- sorry, I've got to go up to Alaska now -- this is an example of a social network that we developed in Alaska based on initial conversations with fishery managers in Alaska. We asked who were the most knowledgeable folks in different regions around Cook Inlet, which is a large embayment in south central Alaska rich with salmon resources.

So we had initial places from which to -- people with which -- from which to cover our base of potential users. In this case, the users were drift net fishermen. You can see here that this central area is folks who have been highly recommended by other peers as knowledgeable fishermen. It's driven by statistics -- Pierson coefficient correlation -- it's a binary matrix. But in the end, we have folks

who are highly integrated in the social network. These are the experts -- the recognized experts -- peer-recognized experts. This is that core part of the network.

We've got 19 people of -- we ended up asking 145 fishermen who the experts were, and that's from a universe of 410 permit holders -- active permit holders, and 600 total permit holders for fishing salmon with drift net.

So once we have this core network of folks, we -- in this case and in other cases, we convene those folks for focus group work, which can involve resource use mapping to get an understanding of the spatial aspect of, in this case, the drift net fishery. It could be applied to MPA analysis pretty readily, I think. Once we get to know these folks, a lot of times we'll get invited to go out on the vessels and attain a deeper understanding of how the fishery works. Ultimately, we could try to approach the larger population with culturally informed surveys and research instruments.

The focus group work is really helpful. Experts contribute to knowledge in an interactive setting. Oftentimes contentious issues surface, but

it's possible to formulate mitigation options and possibilities.

This is just -- focus groups need not be very large. A lot of times we'll go in and talk to small groups of people. This was actually done on an oil drilling platform out in Cook Inlet with fishermen who also work in the oil industry.

Resource use mapping -- it's really useful in documenting historic and temporary use areas. Of course, you've got problems with fishermen or resource users worried about too much resolution in your maps. So we always have caveats on this kind of research and assure confidentiality of place. But I think it's helpful to get a broad picture of what's going on in a given area. That could be applied to an MPA setting. Sensitive and non-use areas can be identified, regulatory areas can be depicted, and a lot of times a regulation forces resource users into a smaller area than we can talk about, and we can depict that in this map. This is an example of a map that we generated with these fishers up in the inlet.

Again, this is a very broad area. But I think you could potentially use this for MPA analysis. This is the -- we got the fishermen to talk about

their range -- their historic range, which included other areas, post-regulatory range, which zeroed in on this area, and general fishing areas. The drift net fleet tends to fish specific current areas. So we've kind of packed a lot of information in there that I think would be useful for MPA analysis.

In fact, we identified an area that is not heavily fished, but that is of interest to the oil industry in the area. So we may have identified a place that could balance out resource use in this particular zone.

I threw this in. This is a little bit different. We're doing some work in the Gulf of Mexico, fishing community research. These maps were generated based on various permit and dealer data. But I think they give a sense of how we can look at community component of resource use and potentially use of MPAs.

This map shows some economic relationships between fish dealers and offshore fishing areas. It's got a large level of resolution. This is a little town in Louisiana, and we're just depicting the location of active permit holders and license holders in the area.

Participant observation. As I said, a lot of times we develop rapport with the folks we convene for focus group work, and they'll take us fishing. It's really a great way to understand the specific nature of fishing operations and interaction with specific places in the ocean.

This was a trip I took with a fellow on the Kona side of the Big Island -- of Hawaii Island. Very useful in understanding how he approached a koa, which is a mounded -- reef mound area. This kind of work gives you a first-hand sense of how people interact with underwater features, and ripe for description.

This was a trip off Wai'anae. It's actually a boat following us all day. This trip was really useful in understanding how these vessels -- these captains interact on the open ocean in relation to specific use areas.

This is a picture of working with a drift net captain. It was really useful in understanding how these vessels negotiate treacherous currents vis-à-vis the resource.

This is an old picture from Suisan, the fish market on Hawaii Island, which is, I believe, defunct. But again, there's a land-based component to this

participant observation type research, too, and a community based component. This is a vessel that fished out of Wai'anae some years ago. Kids loved it.

Getting close here to the end.

The focus group participants are also typically amenable to in-depth interview research. We can find out a lot about how they work around these specific use areas and understand the implications of any kind of regulatory change.

I just wanted to talk just for a moment about -- that's a picture from Puna Lu'u on the Hawaii Island, working with an elderly gentleman who had deep knowledge of the specific area around that coast.

This is an excerpt from Kumu Pono's oral history, a phenomenal document. I just wanted to present an example of information that is sort of longitudinal, historical. There's a wealth of information based on interviews that were done in the last 30 years with fishers throughout the Hawaiian Islands. There's some detail there. This is from the 1920s, speaking about fishing-specific koa in the 1920s. There's, I think, 1500 pages of this kind of material.

This kind of approach I think is useful in

that it also enables development of valid questions for other venues, research instruments and whatnot. We're also working in the Virgin Islands right now. I was struck -- we're using this approach. We're trying to understand how different people from different parts of the island are fishing different areas.

The draft survey instrument that we took was very general. It probably wouldn't have worked had we not gained an understanding that there are actually numerous marine protected areas active in the area, and different people fish them in different ways. So we need -- it helps us refine our survey instrument.

In conclusion, cultural aspects of marine resource use can be accessed systematically. Our intent, again, as consultants in providing government with good information is valid and reliable information is primary, at least just from my perspective. Experts can be efficiently identified, convened and consulted, providing a way for bottoms-up provision of information. With the resource use mapping, spatial aspects of the resource use in communities can be documented. Again, we can contribute to better research protocols.

Finally, with a social systems approach,

persons involved in the establishment and assessment of MPAs can proceed with confidence that experts in each marine resource user group have contributed cultural knowledge to the process, knowledge that by its social nature transcends time and the individual.

And that's it.

(Applause.)

VICE CHAIRPERSON McCAY: Thank you very much. We have a few minutes for questions and other discussion. We've had -- yes, Rod.

DR. FUJITA: Thanks, Bonnie, and thanks, Ed, for that excellent presentation.

I'm wondering if you can comment on how you might combine the information that's gathered through these processes with scientific information -- habitat maps, for example -- to inform an MPA siting process that is sort of aimed at harmonizing ecological goals with social goals and cultural goals --

MR. GLAZIER: Right.

DR. FUJITA: -- and economic goals.

MR. GLAZIER: Well, it may be useful to bring scientists into some of these focus group sessions. We've done that on a couple of occasions. It's been helpful, sort of an interactive understanding

communicated both ways. A lot of times managers and scientists can come to the table with knowledge about what may come down the road in the future. Sometimes that's good if people react to it in a certain way. Other times it can bring some contention to the table, but that can be worked out at the same table. So I think there may be some use in convening different groups, including scientists and managers.

CHAIRPERSON BROMLEY: Yes, Tony.

DR. CHATWIN: Yeah. Thank you very much for that presentation.

I was interested to know, on average, how long it takes from the initial sort of inventory of permit holders to getting to the information that you displayed there, the diagrams and going through all those steps. How long does that take, on average, for the project?

MR. GLAZIER: Folks familiar with fisheries data probably understand there can be some lag time in getting the data to work and getting sufficient data. That's often the hangup. Streamlined data collection and management by government really helps. We've had a lot of trouble -- a lot of fisheries tend to have P.O. boxes, but they don't have physical addresses.

So that's always been a challenge in this kind of mapping, at least the one kind of mapping that we did.

We've had to -- we've gone through various hoops to determine geographic coordinates based on reverse phone number feeding and what- -- you know, there's always a data challenge that has to be overcome, and it takes some time. I guess it depends on the -- that Gulf of Mexico project, I think we're a year and three quarters into the project, but we're nearing completion. I would think that half of that time was involved with data manipulation.

DR. CHATWIN: Would two years be --

MR. GLAZIER: Well, it depends. The work in Cook Inlet, for instance, was a fairly small universe and was done in less than a year. The whole project was done in less than a year. The work in the Gulf of Mexico, I think we're working with -- well, we're working with 300 communities in the Gulf of Mexico. So it's a two-year deal. Knock on wood.

DR. CHATWIN: Thank you.

VICE CHAIRPERSON McCAY: Yes, Bob.

MR. ZALES: In the development of your questionnaires and whatnot for the fishermen, how do you go about doing that? Do you take information that

you've used in other areas and move them to ones that you're currently surveying, or do you take fishermen -- do you involve fishermen from the area that you're surveying in the development of the questionnaires for the type of research that you're looking for?

MR. GLAZIER: The latter is preferable. We really like to get out in the field and try to get an understanding of what's relevant, what's culturally meaningful, and then go from there. There's a pretty good understanding of social and cultural information that's needed. So we're not starting from ground zero. But we like to tweak those instruments based on specific differences between places. I don't think an instrument that would work in the Gulf of Mexico would not work very well on the Wai'anae coast. Some parts of it would, but we'd want to massage it.

MR. ZALES: So in the area of Louisiana where you're working, then, you involve local fishermen in the development of the particular type questions that you're asking for your survey so that you can try to get some localized feel on what was important to them and what they needed?

MR. GLAZIER: Always the best way to proceed, yes.

VICE CHAIRPERSON McCAY: Dolly.

DR. GARZA: Thank you, Bonnie.

I guess I'd like to direct this question to both Ed as well as to William. In terms of trying to go through the process of identifying areas that require protection either because of use of that area for subsistence or cultural gathering, as well as -- I'm not supposed to use it -- but for spiritual protection, and then the other thing that we're grappling with is, is the data that is provided robust? And so there may be times, as you are describing, Ed, where you may be able to pull together use data that through some process may appear robust to scientists. But there are other times where you feel that protection is required, but you're not going to be able to go through that same sort of process. And so I guess I need to get a feel from either or from both of you as to how we would use different processes to come to the same conclusion that, yes, an area should in fact be protected.

MR. AILA: You know, I think in terms of biological or political or spiritual, there are going to be questions that you have to ask -- politically correct questions if you're asking in the political

realm -- and really the very correct questions to ask in terms of if you're trying to find out what's important about an area in terms of gathering spiritual material. It's often not in the asking, but it's very important in the way that you ask, for those kinds of things.

So the nuances is -- you're going to have to have someone who is either the kahu, or the keeper of that area, and you have to convince him that, number one, this information is important enough to your study to be released. And then you have to convince him or her that you're not going to misuse it. And that's the only way that they'll share those kinds of things with you.

With regards to the biological stuff and the other cultural part where you have users, again, it's very important, as he was very successful in Wai'anae of doing, was identifying the key fishermen, and then winning over their confidence that this information is not going to be used against you. This information is actually going to be helpful to you. And after succeeding in that fashion, the doors were opened to Ed. So he got the data that he needed.

MR. GLAZIER: I think, too, you don't

necessarily have to ask. I think it's hard for people to communicate something spiritual. But I think it can be described. I think that participant observation is really useful. I mean, I'm getting chicken skin because I can think of some things I saw, and I tried to describe, but -- you know, so there's a way to do it narrative, not necessarily with survey research or questioning.

DR. GARZA: Okay. I guess just a quick follow-up. I don't know if any of you were here for the morning discussion, but my concern is that as we proceed in sort of identifying MPA needs and the whole national MPA structure needs, that somehow or another culturally significant sites will drop out because we don't have the manpower or the time to do these sort of robust social or biological assessments of these sites to say, yes, indeed, they should be included.

And so if you have any comments that would remind us that -- or give us direction, or perhaps even comment sometime in the future as to how we should approach those types of issues, I would much appreciate it from any of the three of you.

Thank you.

DR. SEVERANCE: There is precedent for using

elder testimony and informal interviewing. And extensive informal interviewing can often set the stage for doing better survey work. Focus groups can often set the stage for doing better survey work. There is rapid assessment. And especially when you're focused on focused particular kinds of information you need, if you can get people to respond, then you can get quite a bit of information in a short period of time.

You also have to deal with issues of proprietary information, confidentiality, and all of that. So it is difficult, but it can be done, and it's well worth trying.

VICE CHAIRPERSON McCAY: Any of the others of you like to join in on that?

MR. AILA: I think there's a danger in focusing too much on sort of a cultural identity of a certain area. In other words, if a proposed MPA occurs in an area where there are cultural or archeological areas of importance, they may be important -- this is a Hawaii-based case -- now, they may be important to me as a person who is connected to that area, but they may not be as important to a person from another island.

For example, if I'm coming to Maui to participate in a cultural observance of some kind, it behooves me as part of my -- because I am a fisherman, I'm recognized as a fisherman, it behooves me to make sure that I bring some sort of marine resource from the area from which I come from as ho'okupu, or an offering, because that's what makes the offering that much more special -- not necessarily that it's a specific or special kind of fish, but it comes from a very specific area.

Another example is wai, water. Oftentimes a valley that is very controversial right now on the Island of Oahu, Makua Valley, in which native Hawaiians are asserting their cultural rights against the U.S. Army, and water is so scarce there that when it rains or when a spring fills with water, that water is collected, because that is the offering that's going to be given whenever any of our members go anywhere else in the world, because this is what's precious about it.

It's the locale and the person who's bringing that offering's connection to that locale that is what makes it more sacred than water from another location. So I hope that helps.

VICE CHAIRPERSON McCAY: These are clearly really very complex issues. One thing that strikes me is that very much federal action concerning impacts for NEPA and other things depends heavily on public scoping processes, hearings and so forth, and large-scale surveys or published data sets. And those are often very inappropriate when dealing with cultural matters, where it really does take the kind of work that has been described here, working really closely with people in often very confidential ways and showing a great deal of respect to be able to identify what the interests are, whether they are, you know, very local and attached to an area or not, and so forth. I think that -- you know, I'm certainly convinced by your presentations of that.

I thank you all very much for this, and welcome you to stay on. We have now a public comment period. I'll turn this back over to Dan Bromley for that. Thank you very much for --

(Applause.)

CHAIRPERSON BROMLEY: Right. We -- at four o'clock on the agenda we have public comment. Dana indicates that we have five people who have requested time to visit with us. We had an hour set aside.

Initially we had told you five minutes, but in light of this, I'm prepared to be generous and give you seven. And if you need more, we might even negotiate over that. But we would like you to shoot for five to seven minutes. If it becomes really drastic, we can bend a bit.

Once the public comment period has ended, we will get back to picking up some of the discussion from Charlie Wahle of this morning.

So I would like now to open the -- formally to open the public comment period of our meeting. I have, as I said, five individuals. When you come to the podium, would you please clearly state your name -- I have it written down, but so the others can hear you -- and state the affiliation or the group that you are here to speak for. If you're here to speak for yourself, that's fine, too. So just let us know what group, if there is one, that you are representing.

So let me start. Ms. Linda Paul, are you here? Yes? Good. Thank you.

MS. PAUL: Good afternoon. Thank you for giving me this opportunity to speak. My name is Linda Paul. I'm Executive Director for Aquatics for the

Hawaii Audubon Society. I teach international environmental law at the University of Hawaii Law School, and I am the Vice Chair of the Northwest Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council.

William Aila, whom you just heard from, is also an officer of that advisory council. That council is a very similar body to this one, except on a local scale. We were established by executive order by President Clinton in the year 2000. We are composed of representatives of several stakeholder groups, including researchers who -- requirement to be on the council -- they have to have done research in the Northwest Hawaiian Islands. We have native Hawaiian representatives, conservation representatives, education representatives, general public, fishermen, and the agency reps -- agencies are also represented on the council -- federal agencies -- but they do not have voting power.

The Northwest Hawaiian Islands Reserve Council and Reserve is in the process of morphing into a national marine sanctuary. We're in the middle of that process. To start that process in 2003, we had a science workshop in which about a hundred experts

came -- I believe Craig Severance was there, as well -- to identify what the research needs and gaps were for the Northwest Hawaiian Islands. This is a prelude to figuring out what the zoning will be in that area.

Since that time, we've been embarked on about three and a half years, and it's ongoing of underwater survey work. Up in the Northwest Hawaiian Islands, a research vessel just left this past week to do some more.

This past summer, the Reserve Council came up with its recommendations regarding the vision, mission, management principles, goals and objectives. Our management principles include a precautionary approach. Those recommendations have now been processed by NOAA and have come back. We have also put together a zoning plan for the Northwest Hawaiian Islands with the help of the reserve staff.

The zoning is very, very protective for a national marine sanctuary -- unusually protective. This is a very special area. Probably the nearest thing we have to that kind of protection in the National Marine Sanctuary System are the Dry Tortugas.

It's protected for a very good reason. This

is the last large-scale, most northern coral reef ecosystem on the planet. It's been relatively unaffected by coral bleaching, although there is some. More than 25 percent of the species up there are endemic, not just indigenous. It's the home to monk seal, which is an endangered species, which is found nowhere else anywhere.

There will be some fishing allowed in the reserve/national marine sanctuary, not a whole lot, and limited to certain areas.

Possibly the biggest threat that this area has is to the introduction of alien aquatic species. We have right now in the main Hawaiian Islands over 350 invasive aquatic species. Some of those have already spread to the Northwest Hawaiian Islands, primarily by hulls -- hull encrustations. Every vessel that goes up there, whether it's a research vessel or a fishing vessel, is a risk to this place. We can slow the process down probably. We can't stop it. At least we haven't figured out a way just yet to stop it.

As you know, this area is -- there are several jurisdictional overlaps in the area. The National Wildlife Refuge -- and you will hear from the

Fish & Wildlife Service -- manages the atolls and some of the surrounding waters to the atolls out to 20 and 10 fathoms, depending on the atoll. The state's jurisdiction extends out to three miles. The reserve/sanctuary jurisdiction goes from three miles to 50 miles, although we would like to incorporate state waters into that, as well.

The state's recently gone out with a rule-making process that establishes very protective areas out to 20 fathoms around most of the atolls and islands, with the exception of Nihoa, and it still allows fishing out to ten fathoms in Nihoa. Nihoa is the closest high island to Kauai. If any of you have ever seen a picture of it, it's basically a rock that juts out of the ocean. You can throw a frisbee from the ten-fathom line to shore at Nihoa.

Both Nihoa and Necker Island, otherwise known as Mokomanamana, are very, very special places to the native Hawaiian people. There are artifacts there, evidence of former settlements there, religious artifacts and cultural artifacts. There's some concern among the Hawaiian Island community of desecration and looting from these islands.

All of this in terms of how you design a

marine protected area -- and that's essentially what we're doing -- are factors, because, for example, the National Marine Sanctuary Program is basically built on a multiple use kind of philosophy. And for this particular area, that maybe is not quite the right kind of philosophy.

In the main Hawaiian Islands -- you had an earlier discussion about the difference was between MMAs and MPAs. We've got an alphabet soup of MMAs in the main Hawaiian Islands. We've got fishery management areas. Some of the well-known ones are, for example, in West Hawaii, where aquarium fish collecting has been restricted to something like 30 percent of the coastline in that area. They are doing studies right now on the effectiveness of restricting aquarium fish collecting in some areas versus not in others.

We have marine life conservation districts, of which you're probably all familiar with Hanauma Bay. And we have one natural area reserve that's an aquatic-based natural area reserve for a native Hawaiian family who has traditionally fished in that area continues to be allowed to fish in that area, but they are the only ones that are.

I guess sort of my couple of parting messages would be that, when you're planning marine protected areas, one size does not fit all. Maybe this -- the mandate of this body would be to set some overall national standards. But in terms of trying to designate particular areas, maybe that might be best left to regional and local communities to really decide what was appropriate for that area.

In terms of the use of the word "lasting" protection, which came up this morning in conjunction with Subcommittee Number 1, I'd just like to put in my plug for interpretation of that word as "in perpetuity." My background is also in fisheries biology. The role of large females in maintaining a sustainable fisheries population is very, very important. The bigger the female gets, she exponentially contributes more to the larval pool. If you have a marine protected area that is sort of an off-again/on-again protected area, what you have is fishermen going in and fishing down the large females first, and it essentially does not function in the way you would like it to function.

That, I think, is all my comments. Thanks.

CHAIRPERSON BROMLEY: Thank you so very much.

(Applause.)

CHAIRPERSON BROMLEY: Our next speaker is Thoriye Abbott.

MR. ABBOTT: Thank you very much. Can you all hear me? Fine.

I'm not sure I want to go after that excellent public comment by Ms. Paul. But I do want to thank you all for having the privilege of being part of the public and being able to attend the meetings here, but more importantly, attend your subcommittee sessions, because that really gives the public a chance to understand what the thought process is, what the debates are, what are the difficult issues.

I have a consulting company. It's called "coastalzone.com". It's an educational website. But I'm just speaking for myself as a public citizen. I've been watching the development of the coral reef initiative and the executive order since late 1999 when I was based in Washington, D.C. and volunteered with a small non-profit group there. I watched the development of the Florida Keys Marine Sanctuary.

More recently, in the last three years, I was located in the Commonwealth of the Northern Mariana

Islands as the natural resource planner for the Division of Fish & Wildlife there. One of our obligations and goals was to develop a system or a network of MPAs. While we were there, we accomplished quite a bit. We're the first state or territory to complete our inventory of MPAs and got that listed on the "mpa.gov" website. That is something I actually did quite a bit of work in.

We're one of three areas to complete -- in the U.S. -- to complete an evaluation of governance indicators for an IUCN WWF study on MPA management effectiveness indicators. We developed an executive order, because there are three environmental agencies in the CNMI, but they tend to all work against each other rather than together. So we developed a new executive order so that all worked much more smoothly.

We also wrote some new legislation that designated five more MPAs -- five new MPAs. There's currently 11.

For my own role, I played a lot of good-cop/bad-cop in the coral reef initiative funding process. I usually ended up being the bad cop, but that was the role to play. But out of that we got three new conservation officer positions. We got two

patrol boats. We got fuel. They hadn't had a patrol boat in 13 years. How do you have any kind of marine protected area when you don't have a patrol boat? That's pretty difficult.

We distributed 5,000 marine protected area brochures. We have tide charts with MPA rules. We've distributed 7,000 of those. There's a website with maps and rules. And the tourist map, which 140,000 tourists that visit the island take, has all the MPAs listed on it and the rules in both Japanese, in icons, and in English.

I'm sure many of you know Billy Causey. I just want to ask you how important you think his role was in establishing the Florida Keys Marine Sanctuary. Now, is that because he's a great leader, or is it because of his culture? -- his culture of activism, he's a recreationalist, and he's an avid fisherman. Jerry Davis down in Guam, same deal.

Now, we have Mr. Zales here. I'm going to pick on you a bit, sir. You're an avid fisherman. What if you went to the Florida Keys Marine Sanctuary, and there were no signs in fisher-speak. There were no boat ramps. There's no educational material. There's no brochures. There are no charts. There's

nothing.

The CNMI has -- 70 percent of the population doesn't speak English and doesn't read English. The vast majority of the population are Chinese, followed by Filipinos, followed by Japanese, none of which are involved stakeholders. Chamorros and Carolinians represent about 15 to 20 percent of the population. And still they have their own language and culture. But all the signs, all the legislation, all the materials are in English.

The leading MPA has over a quarter million visitors a year. They're almost all Japanese. And when you get on the island, there's one sign that says Managaha Conservation Area in English, not in Japanese.

So what's my point? It's that each culture, as you have heard from a number of speakers today, has a reverence for nature. Thais have a reverence for nature, Banglideshis do, Filipinos do, Americans -- caucasians do. All cultures have some reverence for nature within their culture. We really need to connect with that. We need to have grass roots efforts, and we need to find the community leaders that instill the ethics for marine resource use in

each of those subset communities within the Marianas.

I would really encourage you to consider these factors in setting your policy. Traditional ecological knowledge was mentioned in the last presentation. Strengthening cultural lines of enforcement I think is imperative for any MPA to be effective, especially in the Western Pacific. And that's all cultures, not just the local culture, but all cultures.

I'd really recommend in your policy to avoid the current top-down approach that's being implemented. I don't think it's effective and a good use of federal money.

Finally, I'd capitalize on the reverence that all these cultures have for nature. The Japanese have an immense respect for nature. If you can communicate to them, this is a sanctuary, a place of reverence, they'll respect it.

Craig, I believe, said efforts come from the cultural side. And I know it's really hard to capture that in policy. But if you'll allow me, consider this. When you're really having a tough time wrestling, how do you connect to those subsets, those cultures that you don't even necessarily speak their

same language? Consider this: What policy got Mr. Zales involved in this? Because he represents a culture, too. He represents the fishing culture, just like Billy Causey does.

Thank you very much. I'd be glad to answer any questions.

CHAIRPERSON BROMLEY: Thank you.

(Applause.)

CHAIRPERSON BROMLEY: Okay. The next speaker is Hannah Bernard -- or Bernard -- I'm not sure which -- Hannah Bernard.

MS. BERNARD: It's Bernard.

CHAIRPERSON BROMLEY: Bernard. Okay.

MS. BERNARD: Aloha-kako. Thank you very much for being here. We very much appreciate your coming all the way out here, some of you from 6,000 miles away, to get the island perspective. As you mentioned earlier, there definitely is one, and it's different.

I am a Maui resident. I'm the Vice President of Hawaii Wildlife Fund, and the co-founder and myself, the two founders, Bill Gilmartin, are both former National Marine Fisheries scientists. Bill was the Endangered Species Program manager for the

Northwest Hawaiian Islands for 15 years before retiring. He is now on the Reserve Advisory Council that Linda Paul is the vice chair of.

I'm speaking on behalf of the Sierra Club's national committee on marine wildlife and habitat. I am a member.

I could just say "ditto" to Linda Paul's comments and save everybody a lot of time -- and this gentlemen -- there's a lot of crossover there. But there's a few things I want to add. So I'll see if I can skip over some of the redundancy here.

We really appreciate that you had the section that we just got to hear from, the culture and the sea, the Pacific Island perspective. And we'll be hearing more from that. That's so important and so helpful. As you know now, if you didn't already, that Pacific Islanders have a long tradition of living in kinship relationship with what westerners call natural resources, and in some cases are referred to as the "ho'omakua" or family ancestral guardians. So this relationship is extremely important, and as this gentleman mentioned earlier, there is a thread throughout all cultures. All of us are descended from nature-based cultures. Some of us just got

disconnected longer ago than others.

But we can look right in our own back yards here. This 1200-mile-long stretch of islands, banks and atolls that extends north of Kauai, which comprise the Northwestern Hawaiian Islands -- the Island Coral Reef Ecosystem Reserve, is an example where traditional Hawaiian and western approaches are being brought to bear on the management of a marine protected area.

As Linda mentioned, a reserves operations plan is being developed with significant input from the citizens. And that includes fishers, environmentalists -- the community has been involved from the beginning over and over again, which may be one of the reasons that there is such uniformity in support for the protection of this area.

A parallel process, as Linda had mentioned earlier, is being explored for designation of a national marine sanctuary in this area. But many of the most important and vulnerable coral reef resources lie within state waters in the Northwestern Hawaiian Islands. So, therefore, the State of Hawaii has recognized this and is currently in the process of reviewing and acting on public comments on their

proposed designation of this national reserve.

As has been mentioned earlier, the Northwestern Hawaiian Islands are extremely important culturally to Hawaiians, and there is a strong support for a designation of this area as pu'u honua, or place of refuge, for many of the protected species found there, including endangered monk seal, green sea turtle, and millions of seabirds. Even the scientists who have gone there and have come to know that area well refer to it as like no other place on earth.

Our non-profit participated in one of the first multi-agency cleanups before the current NOAA program was in place in '98. A multi-agency task force went up there, including the Navy, the Coast Guard, National Marine Fisheries Service, and took out six tons of debris in six days from one of those little atolls in the French Frigate Shoals alone.

They truly are -- there's no place on earth like it, or for that matter, the entire Hawaiian archipelago.

One of the important issues that I want to add that hasn't been touched on yet is the issue of fishing in this area, and how much, and what would be appropriate. Under provisions of the federal laws

many of you know for national marine sanctuaries, the Western Pacific Regional Fishery Management Council is allowed to propose fishing regulations for sanctuaries. The Secretary of Commerce must accept the regulations unless the Secretary finds them contrary to the goals and objectives of the sanctuary.

The Reserve Advisory Council has recommended strong goals and objectives for the sanctuary, which have been supported by the Sierra Club and other NGOs in a joint letter submitted to the Secretary. We understand that the Secretary will be transmitting his recommendations soon regarding the goals and the objectives for the sanctuary as guidance to the Fishery Council in its development of regulations.

In this context, we are concerned of possible adverse impacts from new legislation and response to recommendations from the Pew Ocean Commission Report and the Commission on Ocean Policy regarding marine protected areas. However well intentioned, we would be concerned over any legislation that could jeopardize the continued protections afforded to the Northwestern Hawaiian Islands Reserve, the Hawaiian Islands National Refuge -- oops -- I'm sorry -- no, that's right -- and the proposed national marine

sanctuary and other similar areas by any form of omnibus legislation that could be interpreted as requiring periodic reviews and justifications for continuing restrictions on fishing. Likewise, while recognizing that fishery councils have a place at the table where MPAs restrict or ban fishing in designated areas, those councils should not be placed at the head of the table and given veto powers over such bans.

Regarding the recommendations of the ocean commissions, we do support strong and urgent actions to protect deep sea corals, and suggest that the tools of marine protected areas be brought to bear on this effort.

Finally, the Sierra Club is also on record as favoring increased federal support for state, territorial and local governments for studying, designating, managing and enforcing marine protected areas. I'd like to reiterate what Linda Paul said earlier about the importance of locally based management and input from the community, as William Aila was talking about.

Most of the coral reef ecosystems accessible to the public in Hawaii are in state waters. The state presently has set aside very few fully protected

MPAs. Those that are, unfortunately, lack sufficient resources for surveillance and enforcement.

We look forward to learning more on the MPA issues that you're going to be discussing, and we will probably be making further comments on Thursday. Mahalo for your time.

(Applause.)

CHAIRPERSON BROMLEY: Thank you, Ms. Bernard. Next speaker is Diane Shepherd.

MS. SHEPHERD: Good afternoon and aloha. My name is Dr. Diane Shepherd, but I'm not a fish doctor, I'm a veterinary doctor.

I have been swimming and diving in Hawaii waters for 40 years now. I also dive in the South Pacific. So I have a perspective that's not only local, but in time as well.

I am a past chair of the Sierra Club Maui Group. I presently serve on the Maui Planning Commission. But we're looking at land. We're doing what we can to mitigate the land effects on the ocean. But no matter what we do, if there's over-fishing, our efforts are going to be for naught.

Who do I represent? Well, today let's say I represent the fish, the invertebrates, the marine

mammals, the algae. They have no voice, and they need more protection.

There are many causes of near-shore ocean depletion. Many are land-based, but a major cause is over-fishing, and it can be mitigated with marine protected areas.

While it's important to recognize cultural and ethnic contributions to our ecological problems, it does divert from the main problem, which is 6.3 billion voracious humans on the earth. I'm sure everyone in this room would like to have a nice fish dinner. But we need to take measures so that those fish are going to stick around.

Commercial fishermen are the last of the hunter/gatherers. But everyone's ancestor was a hunter/gatherer. That's where we all came from. Our brains are hardwired. We are top predators. That's where our instincts go. But we can also think, and we can take measures to curb our activities so that we are not damaging the natural ecosystems.

Natural reserves work. We know that. They will preserve populations, and the way to get fishermen on board is to convince them that, in preserving this area, there are more fish, more

whatever, to fish on the peripheries of these reserves.

Maui has two small marine protected areas. We should have 50 percent of our coastline in reserves, and then a hundred percent would have healthy ecosystems.

The value of Hawaii coral reefs has been placed at ten billion dollars. This is by a study out of Amsterdam. It was put at $360 million per year. Now, this depends on having healthy populations. But we see gill nets taking the juveniles in the near-shore waters so they cannot recruit further out. We see spear fishing and other fishing practices taking the adults so that they cannot reproduce. Of special concern to us here is, remove the herbivores and we get algae blooms. If you have algae blooms, there goes your tourist business, there goes your real estate values of the near shore. So it's really important that we recognize that we need to preserve whole ecosystems. And that's what a marine protected area can do.

I urge you, don't be timid. Don't fiddle while Rome burns. Don't wait until ecosystems collapse. Create more reserves and monitor them so

that we can convince the general population that this is the way we can preserve something for all of us.

We always bring in that we want to have a healthy environment to give to our children and our grandchildren. But the marine animals also should have a chance to have children and grandchildren. That's what I hope you will be doing.

Thank you.

(Applause.)

CHAIRPERSON BROMLEY: Thank you.

Our final speaker is Robert Wintner.

MR. WINTNER: Thanks for being here. I didn't plan to speak this afternoon. I just stopped in to see what this was about, and so I'm unorganized. You'll have to forgive me if I jump around a little bit.

My name is Robert Wintner. I own a company in tourism called Snorkel Bob's. We have stores on all the islands to take care of all your snorkeling needs.

I have to apologize -- being around so many scientists, I've heard several times today that this is a complex issue. It seems pretty simple to me. I come with only two data sets, and that's the basis of

my apology. The first is a day snorkeling in Hanalua Bay in 1994. As Diane said, we have two marine preserves here on Maui. My understanding for years has been that a marine preserve meant that no boat traffic, no fishing of any kind in that area. That has always been observed until recently in Ahihi-Kina'u. But it was never observed, really, up in Hanalua. In 1994, there was always one or two boats allowed in there.

At any rate, on a day there in 1994, I went snorkeling, and had probably one of my most profound experiences on any reef. And I don't want to go into that, but I do want to say that the backdrop was beautiful coral heads of dramatic color, shape and size, from all the rims, all the way down and including the center.

My second data set is a day snorkeling in 2004, recently, at Hanalua Bay. The coral is all dead on the rims. There's one strip of living coral remaining in the center of Hanalua Bay, one of two marine preserves on Maui.

One of the most profound things I heard here when I just walked in was from Mr. Aila, who made reference to the mauka-makai association, the

correlation between the land and the sea and what happens in both places. Now, the reason that that coral died may not be alleviated if that becomes a marine preserve. And what can we do about what happens on the land? Nothing. And maybe that's one of the complexities. And now there are five or seven or nine boats allowed to put people in the water at Hanalua Bay. Maybe that's another complexity that I'm overlooking.

I think the important fact is that something needs to be done. A marine preserve seems to me the order of the day.

I'm reading things in the newspaper where state agencies are now suggesting that we have a snack bar and a gift shop at Makena Beach, for example, which is just up the road from Ahihi-Kina'u, one of our marine preserves. Right now we have four hawksbills on Maui. Only one of them appeared this year to lay nests, and it happened at Makena Beach. So maybe that's part of the makai aspect of what goes on.

Marine preserves are not going to be a be-all-end-all of our problems here. It seems like if you think back even a little bit farther than '94, you

could take a flight almost anywhere, and if you were a smoker, it was pretty comfortable. You just had to sit in back, and you could smoke your cigarettes. If you weren't a smoker, you wondered what was this madness all about? If I lit a cigarette right now, and I was going to do that, but I don't have any, just for dramatic effect, you'd wonder, what is that guy doing? And that's what's happening on our reefs. We're seeing things now -- it's not democratic to say that it's a free-for-all. We have to recognize all the different groups.

Yes, the fishermen took a bad rap from what happened from what the developers did. The developers ruined the estuaries. Estuary equals nursery. If there's no babies for a species, in ten years, there will be no species. So that's what happened on Oahu. And now the fishermen are getting a lot of pressure because they want to still fish, and there aren't that many fish left, and they're getting blamed for taking the last of the fish. It may be that the fishermen have to lay off for a little while. I don't know the answer to that because I'm not a scientist.

It just seems -- for example, I see there's an event coming up -- and I don't want to cast

aspersions, but delicacy is not one of my strong suits -- but they're having a celebration of the living reef at Hanauma Bay I think next month. Hanauma Bay has not been a living reef since they built a second parking lot for the tour busses. There's no ecosystem at Hanauma Bay. If tourists ever stopped going there and putting fish food in the water, most of those fish would die. Okay? And I don't even know if Hanauma Bay is a marine preserve. All I know is it's not a good place to snorkel if you're serious about getting in the water and you love the reefs. I would like to see Hanauma Bay revitalized or restored, either one.

I guess that's the end of my comments. I just think that the idea of having marine preserves is -- I don't want to say no-brainer -- that's a simplification -- but it's something that we desperately need. Thanks very much.

(Applause.)

CHAIRPERSON BROMLEY: I want to thank all of you. You made good comments. You were concise. You stuck to your time. This is very important for us. We take seriously what we hear. Just because we don't push back and engage you doesn't mean we're not taking

careful notes, incorporating what we hear into our thoughts and discussions. So, again, I want to thank you. Some of you said you might be back on Thursday. You're most welcome to do so, provided you have something new to say. So thank you again.

Okay. I think I will declare the public comment period closed.

This morning after Charlie's presentation about the MPA Center activities, we ran out of time. We didn't give Charlie a chance or you a chance to interact and elaborate on Charlie's presentation. So, Charlie, are you game for picking that up where we left it? Well, let's just see what people recall from what you said, and let's see if we can't revitalize the conversation.

A break? What's that? Yes, well, yeah, we can have a break. We're going to adjourn in 20 minutes. I promised to be punctual about that. But if you do need a break, just go, assuming Charlie doesn't need a break. Go ahead, Terry. I think we want to push it ahead. If we break, we'll never get 'em back.

Okay. Mark. I'll just start a queue here. Get with Charlie. Okay. Mark, go ahead.

DR. HIXON: This morning when Subcommittee 1 made its presentation, there was much concern about the difference between an MMA and an MPA, what the filtering process is all about, why anyone would want to do that sort of thing and whatnot. Charlie, would you mind giving some background on that, because your presentations to our subcommittee basically provided a framework for what we did that the other subcommittees I don't believe have actually heard.

DR. WAHLE: Sure. I'd be happy to. Just very briefly on the MMA concept, when we began implementing the executive order, and we realized that the first step and the continuing step is to develop an inventory, we had to figure out what went into it. Because defining an MPA has certain policy implications, we stepped back a step and said, what's a broader net we can cast to fill the inventory? And that was the marine managed area concept.

So think of it as a bigger box of area-based management things, of which some may eventually be deemed MPAs. So the definition of an MMA -- and this is a government thing -- is still going on three-some-odd years later. The definition should be finalized within a couple of months in the Federal Register

notice, at which point we will have firm criteria for what that lower threshold is.

The key issue for this group, I think, is that we have to find a way to filter out of that larger box of area-based things those places that we believe are MPAs. And that's where this filter concept comes in. The filter consists of principally those six terms in the MPA definition that the subcommittees worked on, and then potentially other criteria, as well.

CHAIRPERSON BROMLEY: Thank you. Mark, is that -- okay?

DR. HIXON: Thank you.

CHAIRPERSON BROMLEY: Okay. Rod.

DR. FUJITA: Thank you, Mr. Chairman.

I think I recall, Charlie, that you had -- you made some comments about developing this kind of a national system based on criteria that originate out of our deliberations here, and Subcommittee 1 has articulated some clear goals and objectives and guidance on that. I think Lelei pointed out that there may be some more work to incorporate the recommendations, Subcommittee 2, in terms of process.

But my point is that what we hear from the

public, I think, reenforces a point I made earlier this morning, which is that, indeed, one process or one set of standards does not fit all situations. I think there was very clear articulation here in the public comment period that in the Northwest Hawaiian Islands, we've got this unique case of an MPA that's focused primarily on preserving this relatively pristine system, and may not be appropriate for multiple use.

So I wonder if you can address sort of this kind of anti-backsliding provision that I've talked about so that we don't compromise the existing MPAs that have very stringent protections as we move into articulating a national set of criteria and a national process. One of the problems with the U.S. Commission on Ocean Policy's recommendations on MPAs is that it does recommend one process for the establishment of all MPAs. I think what we're hearing here is that it may not work.

DR. WAHLE: That's a very good point. I should start by saying our process that we showed in the presentation earlier makes no assumptions about the ultimate level of protection achieved by either existing or new sites. Essentially, any suite of

characteristics that meets the criteria of an MPA can work. So you could have something from the Hawaiian Islands Humpback Whale Sanctuary to the Northwest Hawaiian Islands Reserve, and everything in between.

We don't envision any prescribed level of protection, nor, I think, had anyone anticipated the prospect that it might facilitate levels of protection decreasing. Should that come about, this system will inherently prevent it, because that's a local program-specific decision. We might be able to develop incentives to make that less likely. That's a theme that's come up in today's discussion, interestingly, in several different contexts is, what are the incentives and the reasons for being in the national system? And therefore, how does one decide or populate this box?

CHAIRPERSON BROMLEY: Okay. John Ogden.

DR. OGDEN: Thank you, Mr. Chairman.

Charlie, I'm going to revisit my comment earlier. You presentation, or at least my reading of it, implied that somehow the national system of MPAs was somehow a summation of regional efforts. You had these puzzle pieces, and you were beginning to draw lines on the map. You were naturally cheery about

this, and so were all of us.

It strikes me that many of our goals and objectives that are articulated in the executive order and in Subcommittee 1's excellent work are basically -- and to say nothing of the stakeholder involvement, the costs of meeting those goals and objectives are regional in nature.

Could you just give me a capsule on the relationship between essentially the national system and regional MPAs or regional networks, or how we cobble this together?

DR. WAHLE: Sure. I think you're exactly right, that that scale, the regional scale, and maybe even smaller, is where the rubber hits the road. We've thought that all along.

Our vision is that our role would be to, in effect, stimulate and facilitate these regional discussions about what the priorities might be, whether there is a need, and then if there is a need, what the specific MPA fix might be. So we don't -- we're not coming at this from the national scale in the sense that, you know, at a national level we require ten of these and two of those. It's really truly a bottom-up on the regional scale, and our role

is to just help that to happen.

I think where the value comes in is at the regional scale, and then again, if you sum that up nationally, is to look at ideas like representativeness, and to see whether or not we actually have on those two scales protection in the key habitats and ecosystems that we need. But there again, that's a decision that would be made locally and implemented by existing MPA programs. So our role is to provide the forum, if you will, for thinking that through, and identifying the priorities, and developing the plan. And then the programs actually implement or not, as they see fit.

Does that answer your question?

DR. OGDEN: For now.

DR. WAHLE: Okay.

DR. OGDEN: Thank you.

CHAIRPERSON BROMLEY: I have George, Bob and Tundi.

MR. LAPOINTE: Thank you, Mr. Chairman.

Charlie, I want to follow up a little bit on Mark's question of the difference between MMAs and MPAs. And I got kind of the impression during today's discussion that there was a sense that we were

abandoning the areas that didn't rise to the level of candidacy for MPAs.

Can you give us kind of your understanding about that, as well? Because I don't think that's what the discussion is, but that may be my imagination.

DR. WAHLE: Right. And thank you for reminding us about that, because that's critically important. At one level, the executive order is about marine protected areas. And in the end, our work will focus on those entities, whatever we decide they are. But in order to get there, we have to acknowledge that there are other ways in which the ocean is managed, both for conservation purposes, and even for purposes other than conservation, like security zones.

In effect, there's a spectrum, if you will, of purpose and level of protection that runs from marine protected area to marine managed area, which might be a little looser or a little less time in duration, to what we're calling de facto MPAs, which are things that may be very protected, that are there for reasons other than ecology. And somewhere wedged in between the de facto and the marine managed area is a whole other category for which there is no name,

which are things that are area-based management measures, but they don't meet the criteria for MMA.

So whatever those become -- and I think we're all getting kind of frustrated with what the thresholds are -- our approach would be to look at that comprehensively and say, layer after layer, what are the levels and types of protection and conservation value out there in order to therefore look for the holes? So they will certainly not be lost, and, in fact, I believe as a result of this process, some of those measures may find more standing than they currently have.

DR. HIXON: Follow-up on that question?

CHAIRPERSON BROMLEY: Yeah. Okay.

DR. HIXON: So if I understand correctly, Charlie, when you went through those six steps today of the development of a national system, at some point there would be a gap analysis that would include the existing system of MPAs after the filter is applied, plus all other management entities that are out there. And then at that point, identify where new MPAs or other alternate management schemes will fill in those gaps.

DR. WAHLE: That's right.

DR. HIXON: Thank you.

DR. WAHLE: And we have -- in the interest of time -- this may not be the best time to do it -- but we have a graphic that's much more detailed that shows how that works. If you all are willing, we can hang up a paper copy this afternoon, and we can all look at it and think about it in the morning, and we can discuss it further.

MR. BENTON: Mr. Chairman, Charlie, just maybe --

CHAIRPERSON BROMLEY: We have a queue, so --

MR. BENTON: Oh, I didn't understand that.

CHAIRPERSON BROMLEY: No, I'm sorry. I was elsewhere engaged.

MR. BENTON: You were not being diligent.

CHAIRPERSON BROMLEY: Yeah, well, depends.

MR. BENTON: Or maybe you were being diligent.

CHAIRPERSON BROMLEY: Bob, you're next.

MR. ZALES: Charlie, my question, I think, has been answered earlier. But just for the group, in case they need to know -- because I was going to ask, where you had stakeholder inputs, you've got state advisory group, us, federal interagency working group,

and public listening sessions. At our last Subcommittee 1 meeting, I asked who were members of that state advisory group, because I knew of nobody in the Gulf of Mexico who was on there. Come to find out that there was nobody. Essentially, there's no one in the Southeast. The Northeast, Great Lakes, West Coast are all represented. I understand, though, from talking to John that two people are going to be nominated for that group, one from Florida and one from Georgia, which pleases me. The Caribbean's still kind of lacking membership, but maybe y'all can take care of that, too.

On the Federal Interagency Working Group -- and you may not have time to give it to me here -- but I'd like to see a list of who that group consists of.

DR. WAHLE: Okay. I think we could generate that.

MS. WENZEL: Yeah, I can respond to that. I may even have a copy with me. I can get it to you.

MR. ZALES: Okay. Thank you.

CHAIRPERSON BROMLEY: Great. Okay. Tundi.

MS. AGARDY: I'm masquerading as a part of the public. I'm Tundi Agardy. I don't want to put you on the spot, Charlie, especially this late in the

day.

DR. WAHLE: That's okay. I can see the beer coming.

MS. AGARDY: I've kind of developed a reputation lately for being a NOAA-basher. I want you to know that I really appreciate -- I think all of us in the environmental community appreciate the lengths that you and your colleagues have gone to try and move this vision forward and the hard work that you've done to this date, and I know that you will continue to do that hard work.

I was struck when you put up the diagram showing the phases that there wasn't a phase early on that talked to articulating the specific objectives in the marine protected area system -- national marine protected area system. It seems to me -- I just wonder, actually, and pose it as a question, whether the MPA Center folks, you and others, have given any thought to how to possibly rank or weight the myriad of objectives that are listed in the executive order. And I know the things that you've been kind of balancing -- representation versus optimization of existing protected areas, trying to maximize the coordination between agencies, and whether it's

fisheries management or whether it's biodiversity conservation -- so all these things that are kind of implicit in the executive order.

It seems to me that before you can really move forward with evaluating whatever final list of MPAs you have as possible qualifying sites for a national system, that there has to be much more thought given to why a system -- what is it really meant to achieve?

We know from the example of Canada that they went for a representative system. They spent a lot of time trying to do, you know, ecotone, ecosystem, ecoregional evaluations of what they had so that they could get at least one of every type of habitat represented in their system. We also know that they haven't moved very far forward with marine protected areas in Canada. I'm not saying it's because of that, but we do know that.

The government of Australia also went for a representative area system many years ago. This was when it was still in the purview of the Parks Department, not being led by the Great Barrier Reef Marine Park Authority. They also went to great trouble to characterize what they had in terms of

ecosystems to make sure they had one of every type.

Other places set up marine protected area systems for different reasons. I've been working in Italy, for instance, where they have 28 marine protected areas. The purpose of the national system is to make sure that all the provinces get at least one protected area, not for ecological representation, but because the governors want to reap the benefits that protected areas provide -- the influx of tourists, the better feelings in the local community towards the government, and so forth. So it's interesting that they've taken a very different route to how they build their system.

I'm sorry. I'm being very long-winded. But I asked the question of, how much time and effort is the Marine Protected Area Center devoting to articulating very specific objectives for this national system?

DR. WAHLE: Well, that's a very good question. One part of the answer is that -- and -- and this is actually the truth -- is we didn't want to get ahead of the advisory committee on that, because that's so fundamental to what this is all about that that would be a serious train wreck in the making. So

now that we've engaged the advisory committee in the discussion of vision and goals, and from that, objectives, we're beginning to work on that, as well, in parallel. What we hope is that by about this time next year, that your thoughts on the vision and goals, and the MPA criteria, and our thoughts in working with you all on what those objectives might be will be sort of meshed together. And by the time we issue that framework document, we should be able to answer that, and it will be apparent what those goals and objectives are. And if it isn't, then we probably shouldn't issue the document, because that's the story that we're trying to tell.

I think in the end it will probably be, at the national level, a mix of a lot of things that will play out differently in different proportions in different places, so that we'll end up with much like what you're describing. I don't think there's any a priori assumption that it will be representation only or whatever.

CHAIRPERSON BROMLEY: Okay. We have two in the queue yet, Katherine Ewel, and then David Benton. Katherine.

MS. EWEL: Charlie, I accused you earlier

today of outlining a system that had no adaptive mechanisms in it, and I'd like to give you the opportunity to defend yourself and to tell us something about how flexible a framework like this is likely to be. Can you push things back through the filter? Do you think that the basic constructs can be changed?

DR. WAHLE: That's an interesting idea. I'm sure there could be a multi-dimensional filter by the time we get through with that. The last slide -- Lauren, could you -- the basic answer to your question is that we envision the national system as being something that is adaptively managed, both as a system, and then probably more importantly, as individual sites. The distinction there is that our role is to think about the system and its components and effectiveness. But it's really up to the sites and their programs to make those changes as they see fit.

MS. WENZEL: Which slide do you want?

DR. WAHLE: It would be the last one in the presentation, I think, or maybe the second to the last.

DR. WAHLE: This is what it looks like when

you're diving without a mask.

MS. WENZEL: That was the last slide, I believe.

MS. EWEL: Before that -- the one before that.

DR. WAHLE: There we go. Okay. This is also what happens when you sort of run out of time doing one of these presentations.

What this was supposed to convey is that when the system is built, if you will, it's built by individual MPAs through their own programmatic authority, like a sanctuary or a park or what have you. What we envision -- and it will be part of the framework document and part of our work throughout -- is providing to those folks, to the extent they need and want it, the ability to monitor their effectiveness, and to evaluate effectiveness, and to do adaptive management.

I will probably stop looking at the national system's effectiveness toward national goals and saying, well, it looks like overall we might need a few more of this or that. But it's definitely envisioned to be an adaptively managed entity.

MS. EWEL: So you see it as a very federated

arrangement with a lot of control at the regional or local level?

DR. WAHLE: Oh, very much so. We have no control, and we never have, and we don't seek it either. So our role is to just help them -- encourage and cajole these things to happen.

MS. EWEL: Just one follow-up. I'm thinking of the circumstance where you might have something very counter-intuitive, perhaps a situation where the large females don't produce more young, and so you want to manage one area very differently from other kinds of areas. If you have a lot of local control, in a sense, you can bring up situations like that. But you may also have a lot more political influence perhaps in these individual areas. Do you see that as a problem?

DR. WAHLE: Oh, I don't know. I mean, it could be a problem, I suppose. But our fundamental approach, given the directive we were given in the executive order, doesn't allow us to get into that level of issue, nor would we have the capacity. When you think about a thousand-plus sites, the fish not getting big fast enough is probably going to not make it on the radar screen.

What we hope is that by developing these criteria and goals and stuff, that sites, individual MPAs, will locally be empowered and informed enough to look at that situation and make the right decisions for themselves. But we will have no active role in it.

CHAIRPERSON BROMLEY: Okay. I have David, and then I thought I was going to give Benton the last word, but it looks like Terry's in the queue, too -- an ultimate word. Do with it as you will.

MR. BENTON: Charlie, Tundi asked part of the question I was going to ask. That has to do with maybe a clearer articulation of the "why" question for a national system. What goes along with that, to me, sort of hand-in-glove, and could go a long way in answering the question about whether or not an MMA should be included as an MPA, is the question of, what are the incentives, especially if you're looking at the federated kind of approach you're talking about, what are the incentives for entities in a region to want to get involved in an MPA program and a national program, such as states, tribal entities, local governments, whatever? What incentives are going to be there, and what are the consequences for an MMA if

it's included, or what are the consequences of being excluded from being on the list?

I haven't really got a good clear picture of that from the center yet. Maybe you guys had a more in-depth discussion about that, and I just missed it in my usual fog. But it seems to me that if we could start answering some of those questions, then a lot of these other things start clicking together.

DR. WAHLE: That's a very good question. And, no, you haven't missed it, or if you did, I did, too. That concept, among many others, you could probably even see today, is evolving very quickly as these other ideas begin to gel. Frankly, when we first started this years ago, the thought of a national system was essentially a planning tool. It was, we need to identify where the priorities are at various scales so that others can fill them, meet them.

In the past couple of years, as interest has grown in a more comprehensive view of managing the ocean, that has crept into our work, as well, which is probably reasonable. So we're thinking about the national system as an entity, not necessarily as an organization or a top-down thing, but as something

that has some inherent functionality to it. Those questions of what that is are very much on the table.

What we would really appreciate from all of you is ideas on options, ranging from it means nothing to it means a whole lot of interaction, and criteria, and standards, and incentives, and rewards, or something in between. Clearly, those take you down different pathways of, what are your criteria for getting in, or even your reasons for wanting in? So we have no preconceived ideas, and we're definitely looking for input.

CHAIRPERSON BROMLEY: Okay. Terry, the last question, and hopefully a short response.

DR. WAHLE: I'll see what I can do.

MR. O'HALLORAN: So I'll provide a long question.

CHAIRPERSON BROMLEY: No, no -- short question, short response.

MR. O'HALLORAN: I'm just curious about the status of the social science workshops that -- have you started undertaking those, and where we are in that process, and when do you expect to be done, and what will come back, if anything, to our committee? Because as our panelist today -- I mean, the social

science aspect of this is, I believe, critically important. So I think that your work you're doing with those workshops is very germane to what we're trying to accomplish here.

DR. WAHLE: Okay. Did three, we'll do four. The next version is we did a national strategy. We conducted three workshops: the Caribbean, South Atlantic and the Pacific Islands. We plan to do four more over the next, say, 1.5 fiscal years, or something funding-dependent. Those workshops are generating reports on regional priorities.

The three workshops that have been done have been written, and they're being printed. We hoped to have them here for this meeting, but they're not quite available. We think we'll probably start up the next round right around the turn of the calendar year. We're waiting largely to hire a senior social scientist who will do all that. Those documents have already begun to inform and stimulate research.

So it's working, but it's time-consuming.

CHAIRPERSON BROMLEY: Okay. Thank you. You've all -- all of you have been patient, diligent, reasonably punctual. I think we're ready to recess for the day. Lauren has one announcement about

dinner.

MS. WENZEL: I was just going to remind folks that dinner is at 6:30. If anyone would like to come to dinner and hasn't let me know, it's no problem, just let me know and I'll change the number on the reservation. Thanks.

CHAIRPERSON BROMLEY: So we'll see you at 6:30. Thank you.

MS. WENZEL: At the Palm Court.

CHAIRPERSON BROMLEY: The Palm Court. Thank you. Thank you.

(The meeting was adjourned at 5:08 p.m.)