Aquaculture

CHAIRMAN WATKINS: All right. Then, we will shift to the next set of presentations, which will come from Dr. Sandifer and we will take them in order. We have got quite a few here. Dr. Sandifer, take off with Aquaculture.

AQUACULTURE

DR. SANDIFER: Thank you, Mr. Chairman.

(A PowerPoint slide presentation in process.)

DR. SANDIFER: The Stewardship Working Group, to remind you, is responsible for working through issues related to living marine resources and water quality and pollution, principally. At our last two public
meetings, we have spent a great deal of our time and
presentations to the Commission and to the public
dealing with things that are of more global scope, as we
have just heard from Governance and then from REMO
today, the broad guiding principles governing living
resource management and water quality and pollution.

Today and tomorrow, because it will take parts
of both days to get through this, I have 17 individual
issues to work through with you so bear with me a little
bit. The approach of our working group has been to try
to divide our work into bite-sized chunks that we could
reasonably chew and chew fairly thoroughly and then come
up with recommendations.

What I am going to do today a little different
from Jim is to take each of these issue areas and go
through them, and then we will discuss it and then we
will move to the next, rather than trying to review them
all simultaneously, since they cover a variety of living
resource and pollution kinds of issues.

The first one is aquaculture. There will be three slides that appear before you. Let me run through the elements of those slides, and then we will open it
First of all, the Stewardship Working Group has reviewed testimony and quite a bit of other materials related to marine aquaculture, and finds that there is significant potential for expanding U.S. aquaculture and to have it provide excellent additional supplies, high-quality seafood, and perhaps even reduce pressures on some wild stocks.

However, the potential is currently hindered by a burdensome permitting regime, in the marine environment in particular, and the absence of a process for permitting or leasing offshore areas and real and perceived environmental concerns. It is our belief that these concerns need to be addressed at the national level so that aquaculture could expand and expand in an environmentally sustainable manner.

Therefore, we would recommend that the Commission task the National Ocean Council to utilize
the existing mechanism of the Joint Subcommittee on Aquaculture and through that Joint Subcommittee be responsible for developing a comprehensive and coordinated national policy for marine aquaculture.
The next slide.

(A PowerPoint slide presentation in process.)

DR. SANDIFER: The National Ocean Council through the JSA should also develop national standards for operating procedures; a streamlined federal aquaculture permitting process including recommending any necessary changes, statutory changes, to the existing permitting processes; a process for inclusion of aquaculture into any regional ecosystem plans. I will expand on that in a moment.

Specifically, the nation's ocean agency -- right now that is NOAA, but we don't know if this Commission will come up with other kinds of organizational structures in its recommendations -- whatever the nation's ocean agency is it should be designated the lead agency for marine aquaculture and within itself establish an Office of Marine Aquaculture with a permanent national aquaculture coordinator.
What we have in mind, and it is not elaborated on this slide for brevity sake -- back up one slide, please -- is for that office under the national ocean agency in implementing the policy established by the
National Ocean Commission, the lead agency, would have the responsibility for: overall planning for marine aquaculture, planning and designation of offshore lease sites or potential sites, coordination with the Army Corps of Engineers regarding permitting, determining environmental protection measures, determining appropriate exemptions for fishery management regulations, and developing and updating best management practices and codes of conduct.

There would be significant roles for other federal agencies working through the National Ocean Council, as well including the USDA for terrestrial agriculture, the Army Corps of Engineers with its permitting authorities, EPA with water quality standards, and so forth.

Next.

(A PowerPoint slide presentation in process.)

DR. SANDIFER: We are still working, as
Bill Ruckelshaus will elaborate tomorrow, on plans for regional coordinating bodies. Once these entities are in place, then aquaculture should be considered as one of the elements to be incorporated into regional
ecosystem management planning processes, working with the national ocean agencies and federal agencies to develop a streamlined permitting process.

One of the things that these regional bodies should give consideration to is the establishment of standards consistent with national standards for the operation of marine aquaculture facilities and plants. These could, in fact, be considered as basic conditions for permitting aquaculture facilities in public waters. That is a quick review of where we are.

Mr. Chairman, I will turn it over for questions.

MR. EHRMANN: Several commissioners have asked to be recognized.

Commissioner Rasmuson?

MR. RASMUSON: Yes, thank you. I happen to agree with your topic here and how you have presented it. I would also, though, include in
concert with the individual states. You don't say that in there. Our state happens to have an archaic law, which unfortunately they passed, no aquaculture in our state that has to do with fin fish.
If you are going to develop a national standard and ask if they will adopt it, they are going to say no. I don’t know, maybe other states have that, too, I don’t know. I think you have got to have it from the bottom up, too.

DR. SANDIFER: The point is well-taken. I think all of us would agree that we were more emphasizing the potential in the 300 to 200 mile zone, but there are clear impacts in the coastal zone for on-shore activities.

Even though it doesn’t show here on this slide, it is clear in our minds that there would be certain kinds of interactions required in the regional fishery management councils where the states have a legally mandated presence. Whatever ways it is necessary, we will include the state participation.

MR. RASMUSON: I would also include your sister country, Canada, too, because they are very close with
agriculture within our state and within Washington.

DR. SANDIFER: Excellent point. We have got

an issue that we will bring up in a little while on

international living marine resource management.
Malcolm, I will ask staff to make sure that the international aspects of aquaculture get specifically dealt with in there. I may forget to go over it, but we will deal with it.

Thank you.

MR. EHRMANN: Commissioner Hershman?

DR. HERSHMAN: Yes, thank you.

On the first slide, there is reference to the role of the National Ocean Council overseeing the activities of the Joint Subcommittee on Aquaculture, which is itself a tripartite organization. I think it is three different agencies that play a role in that.

DR. SANDIFER: About 12 different agencies.

DR. HERSHMAN: Twelve different agencies.

Then, that the Ocean Council is responsible for developing a national policy for marine aquaculture.

Then, on the next one, you have, "This Nation's ocean agency should be designated the lead agency for marine
19    aquaculture and establish an Office of Marine
20    Aquaculture."
21    The question is, Are you suggesting that the
22    National Ocean Council become sort of an operating
agency in that they would actually have "An Office of Marine Aquaculture, with a permanent National Aquaculture Coordinator," and that sort of thing?

DR. SANDIFER: No. Marc, the intent here is that -- go to the oversight structure first. The Joint Subcommittee on Aquaculture was put together about twenty-something years ago under federal law. It has not worked well, but it has worked a lot better than nothing in terms of coordinating activities of a variety of agencies involved in aquaculture, mostly freshwater-based aquaculture, some marine but mostly freshwater.

The designated lead agency for JSA is the U.S. Department of Agriculture. The U.S. Department of Agriculture in the minds of the Stewardship Working Group was not the appropriate lead for marine stuff. That is part of it.

Secondly, taking the same kind of approach
that unknowingly to us at the time REMO had taken with

the National Ocean Leadership Council, JSA exists in law

and perhaps the best way to make it truly operational is

to make it a subset of the new National Ocean Council.
The National Ocean Council then is able to effect its policy. It has an implementing arm for a national aquaculture policy that is developed at the council level; JSA is, then, the implementing arm for national policy.

The next step beyond the agency representation at the Joint Subcommittee on Aquaculture is there is, in fact, a lead ocean agency and it takes the lead role for really implementing, doing the agency things besides just coming together and coordinating. That is the structure.

You have the National Ocean Council; the JSA is a subcommittee so to speak; and then an agency, NOAA. Currently, the nation's ocean agency is NOAA. We have just chosen to use it, because we don't know what will come out as a recommendation.

DR. HERSHMAN: In the second slide, then, "Nation's ocean agency" doesn't necessarily mean the
National Ocean Council?

DR. SANDIFER: No. It means NOAA or a reorganized something, whatever we come up with or the federal government comes up with. If you would prefer
to substitute NOAA in there, that is where we started.

DR. HERSHMAN: Well, no, I mean, I can see it

is sort of a placeholder for where we get on other

discussions.

DR. SANDIFER: Right.

DR. HERSHMAN: Well, I guess ultimately those
two points that I brought out will be reconciled,
because it is a little confusing right now. More
importantly, the real point I wanted to make was when we
talk tomorrow about the overall governance structure,
the question of the nature of the National Ocean Council
as a coordinating body and not necessarily an operating
body or to discuss the extent to which it would become
somewhat operational, is really an issue that ought to
be brought forward.

This example of aquaculture is a very good one
for that purpose. I am just sort of flagging that for
tomorrow when we talk about the scope and nature of the
National Ocean Council.

DR. SANDIFER: I think that is an excellent

point, Mark, because Admiral Gaffney's points a bit ago

about having the National Ocean Council actually receive
funding and then set priorities and send it out,

Jim Coleman's comments about currently having the
National Ocean Research Leadership Council become a
subunit.

We are through our various recommendations,
basically putting together an ad hoc structure that then
we will further define. It is coming together actually
as a bottom-up kind of thing as we deal with all of
these issues.

We all believe that there has to be a better
coordination than is going on. You have got a unit that
is doing some, let's do a better job of it, but don't
necessarily nuke the unit that is currently in place
until we get something better. That is, essentially,
what this recommendation is.

Then, at the operating agency level, the NOAA
level, we want to actually have somebody responsible to
take on these planning, offshore planning, activities;
the coordination with the Corps of Engineers; EPA; and
so on, and be the place that somebody who wants to go
into aquaculture goes and gets the information necessary
to proceed either to do it or not to do it. Thank you.
MR. EHRMANN: Dr. Rosenberg?

DR. ROSENBERG: Thank you. I am concerned with regard to this issue that some of the focus is on streamlining of permitting and the burdensome nature of permitting. I actually think that the problem is that the management regime we have for aquaculture focuses on all of the wrong things.

Effectively, the Army Corps of Engineers issues a permit as if an aquaculture facility's most important attribute is that it is a hazard to navigation, forgetting about the fact that it contains living organisms, sometimes invasive species, usually invasive species, and then discharged through EPA permits.

I am familiar with aquaculture facilities that are completely out of compliance with those permitting conditions from the Army Corps, but there is no enforcement mechanism. The only actual enforcement
mechanism for some of the aquaculture operations I know

of ends up being through the Endangered Species Act,

which I would argue is not a very good way to manage a

primary economic activity.
I would rather see the focus of this recommendation on developing, as you say here, a national policy for marine aquaculture that has a clearly developed authority to manage aquaculture in an environmentally responsible way.

I happen to think that is necessary wherever the aquaculture operation is, not just in federal waters. The policy should deal with environmental concerns and impacts up front; it should consider coastal planning issues; it should consider the issue of leasing and citing for exclusive use, which isn't mentioned in here, but clearly is a major issue; and then you try to make that permitting process as efficient as possible.

I wouldn't be comfortable with streamlining the existing permitting process, because I think it is doing a terrible job of actually managing the environmental impacts of a lot of fin-fish aquaculture.
at least.

I agree with Ed Rasmuson that there needs to be a clear nexus to the states here, because you need to have that policy apply in near-shore waters as well as
in offshore waters, to the extent possible. I support the recommendation that they be part of the regional governance structure, however that works.

I hope that the focus, when it is written up, is really on developing clear authority, a clear set of goals. You already have in here national standards, an enforcement mechanism to make sure that people adhere to them. The consequences for some of this stuff are huge, like, major impacts on an ecosystem, potentially major impacts on Pacific salmon or Atlantic salmon, wild Atlantic salmon stocks, to take two examples, the disease implications that have occurred in Chesapeake and other places, and so on.

The focus in what is written here is not written that way. Usually, what we hear is, "Oh, the permitting is burdensome. The bigger problem is that the permitting is not doing what it needs to do to actually protect the public trust."
DR. SANDIFER: Andy, the intent is to streamline simply from the standpoint of having a contact as opposed to not knowing where to go and having 14 different places an individual would have to go, not
to change the permitting requirements.

Also, not in the text before you, but the part

I was reading from and will be in the detailed text to

accompany or to support the recommendations, the lead

agency, NOAA in this case at the present time, would be

responsible for all of that overall planning, the

designation and selection of sites and all of the

necessary environmental reviews, the determination of

appropriate environmental protection measures and all of

those kinds of things, interaction with the Fishery

Management Councils, best management practices, and

codes of conduct.

We included specifically things like

performance guarantees, performance bonds to guarantee

that in the event of the failure of the enterprise that

anything left in the water could be removed or in the

event of an impact such as escapement or disease, or so

forth, there would be some funding made available other
than the public purse to try to deal with it.

A number of these things are dealt with in the text. We will add additional on enforcement. It doesn't show here, but in my discussion we did not
intend to usurp the role of the USDA, EPA or the Fishery
Management Councils with regard to appropriate
activities like permitting and such.

DR. ROSENBERG: However, I do think that you
said "streamline," but not change the permitting
process. I am suggesting the permitting process needs
to be completely changed, because it focuses on the
wrong things.

I am not interested in navigational hazards as
the first question I asked about putting in an
aquaculture facility. I am interested in is it an
appropriate facility in that location, given that it has
living organisms in it, not whether a ship is going to
run into it.

Right, now the permitting process, the very
last thing you think about, with no authority is
commenting on what the environmental impacts might be.
I think that it needs a complete overhaul of the
permitting process, to focus on the right things. Is this doing what we need to do to provide environmentally sound aquaculture facilities? Then, let's worry about where we are going to put it and is it in the way of a
ship, caricaturing obviously the Army Corps role here.

Therefore, I do think that we should be recommending a
major overhaul of that permitting process in terms of
the focus of the requirements.

DR. SANDIFER: Again, I don't debate that with
you, Andy. This is part of the policy development that
needs to be done, and it has not been done. At the
moment there is not even a mechanism, a real mechanism,
to allow a permit process in the offshore area that
makes any sense at all. We will go back and take a look
at that.

Understand, there is more to this than you are
seeing today. The one-stop shopping sort of thing of
the streamlining is a suggestion that you be able to go
to one office and get the information you need as to
what you have to provide to the Army Corps of Engineers
and what do you have to provide to EPA, et cetera,
et cetera, not to try to do away with those requirements
19 in any shape, form or fashion.

20 MR. EHRMANN: Mr. Ruckelshaus?

21 MR. RUCKELSHAUS: A lot of my comments were

22 similar to the ones Andy mentioned, Paul. I would
suggest a couple of other things. As far as the powers of the National Ocean Council are concerned, it seems to me we have got to be very careful not to load it up with too many operational kinds of responsibilities.

In one of our recommendations, which we may discuss tomorrow, we are suggesting that a more comprehensive regime needs to be put in place by the Congress. In the meantime, the National Ocean Council should simply designate a lead entity and let that lead agency take the responsibility for setting standards or things of that nature.

I am afraid the Council, at least as I envision it, isn't going to be a very good standard setting entity. That was one recommendation. We had another one. Let me see if I can find it.

(Pause.)

MR. RUCKELSHAUS: I will come back to it.

DR. SANDIFER: Bill, as a question on that,
for example, if we continue the Joint Subcommittee on Aquaculture but have it reporting to the National Ocean Council, the National Ocean Council could empower or designate the JSA to develop these national standards
and bring them back for approval.

MR. RUCKELSHAUS: Right.

DR. SANDIFER: That is the kind of thing we had in mind, and perhaps we can perfect our work. There is an operating entity, but if you give it a little bit of a higher level of clout that says "Thou shalt" to these agencies, then get together and come up with something that is useful and it is approved at the agency head or the NOC level, then you have got something for a lead agency to implement. That is the intent. Perhaps, we can perfect the wording here, if that would suit you better.

MR. RUCKELSHAUS: Absent any statutory authority to issue standards, the Council probably couldn't do it anyway. I think if they had that authority now by statute, that would be the right agency to designate.

The other thing is in the recommendations,
which we have discussed in the Governance Working Group.

We distinguish between those in the aquaculture activities beyond the Territorial Sea and those within the three-mile limit. I'm not even sure where it ends.
and where it begins, whether it is 12 miles or three miles. In any event, it seems to me that we should coordinate these two recommendations for outside the Territorial Sea and another one inside, so we should get these two recommendations together.

MR. EHRMANN: Very good.

Dr. Muller-Karger?

DR. MULLER-KARGER: Thank you. I assume that just for briefness, not everything that we talked about and is in the paper is on these slides. I just want to make sure that things are on there, some of the things that we did discussed, and are included in our policies as they come together.

I agree with Andy's point that whatever we do has to be environmentally sound. I also want to make sure that whatever we do has the consumer health in mind. I already know that there are some people that
are worried about hormone content and antibiotics in farm fish. I want to make sure that whatever we do that our policies keep the consumer in mind and not just the fish that are being raised. The other thing that I wanted to make sure of
is that right now we have a huge industry that imports
aquaculture products to us. I want to see what you guys
think. Do we hold those industries to the same
standards as we are going to develop here for the U.S.
industry?

If we raise the bar very high for U.S.
industry, which is I think is an important thing to
consider, are we then pushing these industries offshore
where they don't have to deal with these standards and
then we import a product that has some issues?

In my view, we should have a mechanism and
some policies that hold industries that bring products
into the U.S. to the same standards as we hold the U.S.
industries.

I also thought that it is important that we
develop an international aquaculture leadership and
training program in the U.S. There is an important
international dimension to this whole issue of
aquaculture, and we should be part of a leadership program.

DR. SANDIFER: Let me comment very quickly on a couple of those. The international standards, there
are limits to what we can do, but clearly we can add this into the international living marine resource management section.

There are a number of efforts underway both by agencies, FDA in particular and the National Marine Fisheries Service, and the U.S. Congress to ensure that U.S. standards for residues of treatment chemicals, for example, in the flesh of imported seafood products are met.

Things that we cannot do in this country, treating with chlorine-phenol, for example, and having a body burden, a measurable body burden, of chlorine-phenol in shrimp or crawfish or lobster product is not allowed in this country, so we should not allow it in imported products. There are some mechanisms there and some examples we can pick up. Your point about consumer stuff is very good.
We did intend, both for you and for Andy to remind you and again for brevity not showing here, that the national standards that are developed, then, would become regional operating procedures that would include the issues related to water quality, specifics on
methods and gears to minimize escape, minimize any
impacts to human health, minimize disease issues and the
performance bonds or other kinds of financial guarantees
that are real financial guarantees.

All of that should be part of the operating
performance package that operation would have to deal
with. I do think there is a lot more here that we
discussed than we could possibly put on slides here.

Certainly, we will add the international component and
the standards either to this section or to the
international living marine resources section or both,
however it is appropriate to deal with. Staff is
nodding that they have got it.

MR. EHRMANN: All right. Let me just, before
we move on, double check with staff. Any questions or
clarifications, more information you need based on this
discussion?

THE STAFF: (Shaking heads.)