

Aquaculture

CHAIRMAN WATKINS: All right. Then, we will

12 shift to the next set of presentations, which will come
13 from Dr. Sandifer and we will take them in order. We
14 have got quite a few here. Dr. Sandifer, take off with
15 Aquaculture.

16 AQUACULTURE

17 DR. SANDIFER: Thank you, Mr. Chairman.

18 (A PowerPoint slide presentation in process.)

19 DR. SANDIFER: The Stewardship Working Group,
20 to remind you, is responsible for working through issues
21 related to living marine resources and water quality and
22 pollution, principally. At our last two public

1 meetings, we have spent a great deal of our time and
2 presentations to the Commission and to the public
3 dealing with things that are of more global scope, as we
4 have just heard from Governance and then from REMO
5 today, the broad guiding principles governing living
6 resource management and water quality and pollution.

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

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

19 resource and pollution kinds of issues.

20 The first one is aquaculture. There will be

21 three slides that appear before you. Let me run through

22 the elements of those slides, and then we will open it

1 up for discussion.

2 First of all, the Stewardship Working Group
3 has reviewed testimony and quite a bit of other
4 materials related to marine aquaculture, and finds that
5 there is significant potential for expanding U.S.
6 aquaculture and to have it provide excellent additional
7 supplies, high-quality seafood, and perhaps even reduce
8 pressures on some wild stocks.

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

17 Therefore, we would recommend that the
18 Commission task the National Ocean Council to utilize

19 the existing mechanism of the Joint Subcommittee on
20 Aquaculture and through that Joint Subcommittee be
21 responsible for developing a comprehensive and
22 coordinated national policy for marine aquaculture.

1 The next slide.

2 (A PowerPoint slide presentation in process.)

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

11 Specifically, the nation's ocean agency --
12 right now that is NOAA, but we don't know if this
13 Commission will come up with other kinds of
14 organizational structures in its recommendations --
15 whatever the nation's ocean agency is it should be
16 designated the lead agency for marine aquaculture and
17 within itself establish an Office of Marine Aquaculture
18 with a permanent national aquaculture coordinator.

19 What we have in mind, and it is not elaborated
20 on this slide for brevity sake -- back up one slide,
21 please -- is for that office under the national ocean
22 agency in implementing the policy established by the

1 National Ocean Commission, the lead agency, would have
2 the responsibility for: overall planning for marine
3 aquaculture, planning and designation of offshore lease
4 sites or potential sites, coordination with the Army
5 Corps of Engineers regarding permitting, determining
6 environmental protection measures, determining
7 appropriate exemptions for fishery management
8 regulations, and developing and updating best management
9 practices and codes of conduct.

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

16 Next.

17 (A PowerPoint slide presentation in process.)

18 DR. SANDIFER: We are still working, as

19 Bill Ruckelshaus will elaborate tomorrow, on plans for
20 regional coordinating bodies. Once these entities are
21 in place, then aquaculture should be considered as one
22 of the elements to be incorporated into regional

1 ecosystem management planning processes, working with
2 the national ocean agencies and federal agencies to
3 develop a streamlined permitting process.

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

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

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

15 Commissioner Rasmuson?

16 MR. RASMUSON: Yes, thank you.

17 I happen to agree with your topic here and how
18 you have presented it. I would also, though, include in

19 concert with the individual states. You don't say that
20 in there. Our state happens to have an archaic law,
21 which unfortunately they passed, no aquaculture in our
22 state that has to do with fin fish.

1 If you are going to develop a national
2 standard and ask if they will adopt it, they are going
3 to say no. I don't know, maybe other states have that,
4 too, I don't know. I think you have got to have it from
5 the bottom up, too.

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

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

17 MR. RASMUSON: I would also include your sister
18 country, Canada, too, because they are very close with

19 agriculture within our state and within Washington.

20 DR. SANDIFER: Excellent point. We have got

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

22 international living marine resource management.

1 Malcolm, I will ask staff to make sure that
2 the international aspects of aquaculture get
3 specifically dealt with in there. I may forget to go
4 over it, but we will deal with it.

5 Thank you.

6 MR. EHRMANN: Commissioner Hershman?

7 DR. HERSHMAN: Yes, thank you.

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

13 DR. SANDIFER: About 12 different agencies.

14 DR. HERSHMAN: Twelve different agencies.

15 Then, that the Ocean Council is responsible for
16 developing a national policy for marine aquaculture.
17 Then, on the next one, you have, "This Nation's ocean
18 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

1 agency in that they would actually have "An Office of
2 Marine Aquaculture, with a permanent National
3 Aquaculture Coordinator," and that sort of thing?

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

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

18 Secondly, taking the same kind of approach

19 that unknowingly to us at the time REMO had taken with
20 the National Ocean Leadership Council, JSA exists in law
21 and perhaps the best way to make it truly operational is
22 to make it a subset of the new National Ocean Council.

1 The National Ocean Council then is able to
2 effect its policy. It has an implementing arm for a
3 national aquaculture policy that is developed at the
4 council level; JSA is, then, the implementing arm for
5 national policy.

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

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

17 DR. HERSHMAN: In the second slide, then,
18 "Nation's ocean agency" doesn't necessarily mean the

19 National Ocean Council?

20 DR. SANDIFER: No. It means NOAA or a

21 reorganized something, whatever we come up with or the

22 federal government comes up with. If you would prefer

1 to substitute NOAA in there, that is where we started.

2 DR. HERSHMAN: Well, no, I mean, I can see it
3 is sort of a placeholder for where we get on other
4 discussions.

5 DR. SANDIFER: Right.

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

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

19 National Ocean Council.

20 DR. SANDIFER: I think that is an excellent
21 point, Mark, because Admiral Gaffney's points a bit ago
22 about having the National Ocean Council actually receive

1 funding and then set priorities and send it out,
2 Jim Coleman's comments about currently having the
3 National Ocean Research Leadership Council become a
4 subunit.

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

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

16 Then, at the operating agency level, the NOAA
17 level, we want to actually have somebody responsible to
18 take on these planning, offshore planning, activities;

19 the coordination with the Corps of Engineers; EPA; and
20 so on, and be the place that somebody who wants to go
21 into aquaculture goes and gets the information necessary
22 to proceed either to do it or not to do it. Thank you.

1 MR. EHRMANN: Dr. Rosenberg?

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

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

15 I am familiar with aquaculture facilities that
16 are completely out of compliance with those permitting
17 conditions from the Army Corps, but there is no
18 enforcement mechanism. The only actual enforcement

19 mechanism for some of the aquaculture operations I know
20 of ends up being through the Endangered Species Act,
21 which I would argue is not a very good way to manage a
22 primary economic activity.

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

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

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

19 at least.

20 I agree with Ed Rasmuson that there needs to
21 be a clear nexus to the states here, because you need to
22 have that policy apply in near-shore waters as well as

1 in offshore waters, to the extent possible. I support
2 the recommendation that they be part of the regional
3 governance structure, however that works.

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

14 The focus in what is written here is not
15 written that way. Usually, what we hear is, "Oh, the
16 permitting is burdensome. The bigger problem is that
17 the permitting is not doing what it needs to do to
18 actually protect the public trust.

19 DR. SANDIFER: Andy, the intent is to
20 streamline simply from the standpoint of having a
21 contact as opposed to not knowing where to go and having
22 14 different places an individual would have to go, not

1 to change the permitting requirements.

2 Also, not in the text before you, but the part
3 I was reading from and will be in the detailed text to
4 accompany or to support the recommendations, the lead
5 agency, NOAA in this case at the present time, would be
6 responsible for all of that overall planning, the
7 designation and selection of sites and all of the
8 necessary environmental reviews, the determination of
9 appropriate environmental protection measures and all of
10 those kinds of things, interaction with the Fishery
11 Management Councils, best management practices, and
12 codes of conduct.

13 We included specifically things like
14 performance guarantees, performance bonds to guarantee
15 that in the event of the failure of the enterprise that
16 anything left in the water could be removed or in the
17 event of an impact such as escapement or disease, or so
18 forth, there would be some funding made available other

19 than the public purse to try to deal with it.

20 A number of these things are dealt with in the

21 text. We will add additional on enforcement. It

22 doesn't show here, but in my discussion we did not

1 intend to usurp the role of the USDA, EPA or the Fishery
2 Management Councils with regard to appropriate
3 activities like permitting and such.

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

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

15 Right, now the permitting process, the very
16 last thing you think about, with no authority is
17 commenting on what the environmental impacts might be.
18 I think that it needs a complete overhaul of the

19 permitting process, to focus on the right things. Is
20 this doing what we need to do to provide environmentally
21 sound aquaculture facilities? Then, let's worry about
22 where we are going to put it and is it in the way of a

1 ship, caricaturing obviously the Army Corps role here.
2 Therefore, I do think that we should be recommending a
3 major overhaul of that permitting process in terms of
4 the focus of the requirements.

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

12 Understand, there is more to this than you are
13 seeing today. The one-stop shopping sort of thing of
14 the streamlining is a suggestion that you be able to go
15 to one office and get the information you need as to
16 what you have to provide to the Army Corps of Engineers
17 and what do you have to provide to EPA, et cetera,
18 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

1 suggest a couple of other things. As far as the powers
2 of the National Ocean Council are concerned, it seems to
3 me we have got to be very careful not to load it up with
4 too many operational kinds of responsibilities.

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

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

16 (Pause.)

17 MR. RUCKELSHAUS: I will come back to it.

18 DR. SANDIFER: Bill, as a question on that,

19 for example, if we continue the Joint Subcommittee on
20 Aquaculture but have it reporting to the National Ocean
21 Council, the National Ocean Council could empower or
22 designate the JSA to develop these national standards

1 and bring them back for approval.

2 MR. RUCKELSHAUS: Right.

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

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

18 The other thing is in the recommendations,

19 which we have discussed in the Governance Working Group.

20 We distinguish between those in the aquaculture

21 activities beyond the Territorial Sea and those within

22 the three-mile limit. I'm not even sure where it ends

1 and where it begins, whether it is 12 miles or three
2 miles. In any event, it seems to me that we should
3 coordinate these two recommendations for outside the
4 Territorial Sea and another one inside, so we should get
5 these two recommendations together.

6 MR. EHRMANN: Very good.

7 Dr. Muller-Karger?

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

14 I agree with Andy's point that whatever we do
15 has to be environmentally sound. I also want to make
16 sure that whatever we do has the consumer health in
17 mind. I already know that there are some people that

18 are worried about hormone content and antibiotics in
19 farm fish. I want to make sure that whatever we do that
20 our policies keep the consumer in mind and not just the
21 fish that are being raised.

22 The other thing that I wanted to make sure of

1 is that right now we have a huge industry that imports
2 aquaculture products to us. I want to see what you guys
3 think. Do we hold those industries to the same
4 standards as we are going to develop here for the U.S.
5 industry?

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

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

15 I also thought that it is important that we
16 develop an international aquaculture leadership and
17 training program in the U.S. There is an important
18 international dimension to this whole issue of

19 aquaculture, and we should be part of a leadership

20 program.

21 DR. SANDIFER: Let me comment very quickly on

22 a couple of those. The international standards, there

1 are limits to what we can do, but clearly we can add
2 this into the international living marine resource
3 management section.

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

10 Things that we cannot do in this country,
11 treating with chlorine-phenol, for example,
12 and having a body burden, a measurable body burden, of
13 chlorine-phenol in shrimp or crawfish or lobster
14 product is not allowed in this country, so we should not
15 allow it in imported products. There are some
16 mechanisms there and some examples we can pick up. Your
17 point about consumer stuff is very good.

18 We did intend, both for you and for Andy to
19 remind you and again for brevity not showing here, that
20 the national standards that are developed, then, would
21 become regional operating procedures that would include
22 the issues related to water quality, specifics on

1 methods and gears to minimize escape, minimize any
2 impacts to human health, minimize disease issues and the
3 performance bonds or other kinds of financial guarantees
4 that are real financial guarantees.

5 All of that should be part of the operating
6 performance package that operation would have to deal
7 with. I do think there is a lot more here that we
8 discussed than we could possibly put on slides here.
9 Certainly, we will add the international component and
10 the standards either to this section or to the
11 international living marine resources section or both,
12 however it is appropriate to deal with. Staff is
13 nodding that they have got it.

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

18 THE STAFF: (Shaking heads.)