MR. EHRMANN: Okay. I am not sure whether we are moving up or down the hierarchy of stewardship issues by moving to marine debris, but let's go ahead to marine debris.

MARINE DEBRIS

DR. SANDIFER: In my case, I believe this is becoming mental debris as I work my way through this list.
DR. SANDIFER: Marine Debris has been characterized a number of times as a very significant problem, both in terms of its immediate impact on resources, its long-term impact particularly in the case of plastics kinds of stuff, and the impact it has on economic uses.

Nobody wants to go onto a foul beach, that is, a beach or a stream that has litter all over it or junk. This, again, begins with a recommendation that the biggest opportunity to improve the situation is by educating the public how their individual actions affect the marine debris problem.

In our analysis of this, we found that at one point there was an interagency marine debris committee co-chaired by EPA and NOAA, and that apparently has fallen on hard times. As another one of these examples where this kind of coordination is essential, we would
strongly recommend reestablishment of that program.

We also found that a program that had been quite active back in the, I think, late 1980s and early 1990s through to the mid-1990s was the Marine
Entanglement Research Program out of NOAA that dealt with lost fishing gear and its non-intended impacts on living marine resources, particularly killing marine mammals and seabirds, turtles.

This program was lost after 1996, yet the problem of gear loss, not only fishing gear but related packing materials or whatever, continues to be a significant problem. We recommend that that Marine Entanglement Research Program be revisited.

Also, improve port reception facilities to address the marine debris problem. Ed, I think even in Alaska we saw some cases where material was being brought in by fishing boats where they had picked up some derelict gear and then had to figure out what in the heck to do with it once they get to the dock with it. It is not a trivial question, What are you going to do with these huge pieces of gear?

We believe that Congress should require
establishment of technical standards for reception facilities. You can move on. This is also an area in which we believe we should take a lead in the international environment by supporting and assisting
other countries in implementing special area
designations under MARPOL. Our staff knows far more
about this than I do, but those places where you have
areas of special significance and no place to do
anything with junk, here it is.

We had some significant discussions about how
much research is needed in this arena and concern that a
recommendation to simply study the problem ends up being
study and no implementation. Yet, at the same time
there are some issues, particularly in international
waters, that do need study.

We suggest the National Research Council work
with the appropriate international agency, it might be
the Food and Agriculture Organization of the
United Nations, and any other appropriate international
bodies dealing in the marine environment, perhaps ISIS,
to make recommendations to address the derelict fishing
gear and other marine debris problems. In so doing,
both here in this country and internationally, we suggest improving information such as source identification, monitoring, and the sharing of data. Finally, we believe there should be an
increase in funding for public education, monitoring and
source identification, prevention and derelict fishing
gear removal programs. A good example of this was the
Northwestern Hawaiian Islands Expedition that a number
of us heard about in some of our site visits. I believe
that concludes this one at this point.

MR. EHRMANN: Commissioner Rasumson?

MR. RASMUSON: Thank you.

This business of derelict fishing gear, we
call them "death nets." We don't allow them in our
fisheries; but the Taiwanese, the Japanese, I believe
the Koreans and what have you, and others do. They will
be out 4 miles, 5 miles, 6 miles, 10 miles, 15 miles, 20
miles, or 30 miles.

We have discussed that at length with
Senator Stevens about what we could do. Some
suggestions that came up is that on an international
basis we would like to encourage those companies,
fishing companies, that use those large, long nets --
because in international waters I don't think they are
illegal -- to have transponders on either end of the
nets.
When they break off, they can start beeping and you can find where they are at. Now, what happens is they get the sea mammals and all the other fish in there, they drop down below the surface, then they rot out, they go back up again, and they start fishing again.

If we can get them on the transponder before that happens, we could have boats either in Hawaii, which is right here, or over in Kodiak, because over in the North Pacific usually they are over by Guam, go out there and get these nets and burn them up. I think it sounds far-fetched, but I think that is the way we are going to have to do it.

DR. SANDIFER: Ed, I think your point is well-taken. We did not specify drift net, gill-net fishing, but that is an appropriate issue to include here. We did talk about life-cycle costs of net manufacturers that perhaps net manufacturers ought to
have include some kind of cost --

MR. RASMUSON: Biodegradable?

DR. SANDIFER: Biodegradable issues and some

kind of cost or fee to be paid for the ultimate recovery
of these things as well. Transponders on nets might be a way to do it.

MR. RASMUSON: It has got to be done in a cooperative effort with the foreign nations that use these.

DR. SANDIFER: It absolutely does. That is why we flagged this as an area of international cooperation. It wasn't included specifically early. The marine debris we are talking about, both international study and international implementation, I don't know enough about all of those organizations to suggest which one is the right one, international organization, to work with.

The high-seas drift net is one element, but, as you mentioned, just lost nets is another one. If there is some mechanism to have locators on them, it might be a significant advantage. That is a technological side that we could add in here.
That is not the only means of marine debris.

We also talked about beach sweep kinds of activities in coastal areas and how important that is. That is part of the whole public participation, the public education
effort here, but it goes beyond that. It is literally
from the creek behind your house or the stream that you
go to at a lake that you go to all the way out into the
middle of the ocean.

MR. EHRMANN: Commissioner Rosenberg?

DR. ROSENBERG: Thank you.

On the ocean gear issue, I agree that it is
important to continue to work through international
agreement to address this. Of course, with drift nets
there is an international agreement and we have had
high-profile enforcement cases and even extensive
negotiations to end the drift-net fishing. There have
even been high-seas arrests by the Coast Guard.

I think drift netting is less of a concern
than other kinds of gear now, everything from long lines
to the remaining kinds of netting. I wouldn't say that
drift netting has been eliminated, but at least there is
an international agreement that has been effective.
I do think that more broadly we need to work in some of the regional organizations to try to get agreement on how you deal with discarded or lost fishing gear. Part of the problem here is there needs to be
some incentive for people to bring it home. I mean, not only is it a problem of what do you do when you bring it home, but in some cases domestically there is absolutely no incentive if you have everything from lost lobster gear to long-line gear for somebody to pick it up and bring it back.

It is a major issue, and so some careful thought needs to be given to development of incentive programs for people to actually clean up gear. In fact, it probably would not be a bad thing if there were a way to actually compensate people for the expense of bringing in discarded gear.

DR. SANDIFER: Andy, just one second. I suspect that the compensation would be a lot cheaper than leaving it out there.

DR. ROSENBERG: Right.

DR. SANDIFER: Again, that is an area that staff can look at. Secondly, if you have suggestions of
regional organizations, can you get those to us specifically? That is an area that I simply didn't feel confident that I knew about.

DR. ROSENBERG: Right. Well, I think there
are some regional organizations, and I will give those names to staff, both in the Pacific and Atlantic. I don't know about the Indian Ocean ones.

I think it is fine to go to FAO, but if you are going to go to FAO, the effort should be to develop an international plan of action, the same kind of thing that was done with seabirds or with sharks. That is what FAO can do as voluntary agreements, and then the regional organizations can feed off of that.

It is quite similar to the marine mammal bycatch issue. I mean, hopefully, we would be encouraging an organization like FAO to develop an international plan of action, which then can be picked up by regional organizations for implementation. That is probably the right route to go.

I mean, of course the drift-net mechanism is much more powerful, but it is unlikely you will be able to do that more broadly. It is certainly worth asking
the State Department and others to consider what might
be the possible international instruments to deal with
this issue. There is a domestic problem as well as an
international one.
I also think that it would be very helpful in the discussion to refer to some of the public education exercises, beach cleanup, and that might be in the text. Those are really important efforts to encourage to raise public awareness. Here maybe it is because of the way it was --

DR. SANDIFER: Those are in the background information specifically, because that is an area where a number of us have local experience and understand it. We are trying to find some other examples that would work as well.

DR. ROSENBERG: I think they should be highlighted, because I do think they are very important.

MR. EHRMANN: Commissioner Borrone?

MRS. BORRONE: Thank you.

Well, I appreciate the last point that Andy just made and the one you made earlier, Paul. I would really like to get back to the coastal issues as well or
the coastal-related issues.

We have had harbor drift programs. Both EPA and the states have vessels out picking up debris or rotting pier structures or other materials, agriculture
or other products, that can be hazards both to

navigation, as well as to marine life, and of course

users of the coast.

This is an area that is not clear to me, but I

am hopeful that when we are talking about these issues

in the paper we are talking about issues not only on the

high-seas, but also in the coastal areas, in our harbor

areas as well and encouraging either the continuation of

already-funded programs or the reauthorization of

programs whose funding may have lapsed; or encouraging,

as you have suggested, local environmental organizations

to work in a collaborative fashion perhaps to put some

reward money on the table to help achieve some of these

things with volunteers or with the states.

DR. SANDIFER: I think that last is excellent,

Lillian. I hope we will capture that. The NGOs could

be a great help in this. Also, we actually talked
longer about inshore stuff than the offshore. The offshore just happens to be bigger chunks than the inshore. One of the things we talked at length about and will, I hope, be reflected in the text is public
education dealing with prepared foods, for example, not just fast food. Fast food is a lot of the debris that then floats into our waters as a result of careless either use by you and me as consumers or containment on the way to landfills. A lot of that material ends up in coastal waters.

In some cases, municipalities are enacting ordinances that the originator has to do some things; in other cases, it is public education. The reality is the public impact is the big one. We captured some of that in our discussions, but not so much here. The only formal program most of us know about is the beach sweep/river sweep one. If there are others that we need to be made aware of that we can cite, that would be great.

For example, every time we have a good example and say, "Go do this, the people someplace in New Jersey or in South Florida or in Houston or wherever are doing
a great job," that helps our report, I think. It tells people, "My community isn't measuring up the way it should be. Here is something we can really do."

MRS. BORRONE: Well, I think we could turn. I
know there was some NGO representatives in the audience,
but I think we could turn to the Coastal Alliance, the
Clean Ocean Action, or some of those other organizations
to help us out here.

DR. SANDIFER: Thank you.

MR. EHRMANN: Commissioner Kelly?

MR. KELLY: Paul, you know I participated in
this discussion as a member of the Stewardship
Committee, but one item I forgot to bring up is another
area where there are international implications that in
the beach cleanups in the Gulf of Mexico we are finding
a lot of five-gallon drums and other things with Spanish
labels on them.

Because of the prevailing winds and currents,
we get a lot of things from Mexico ending up on Texas
and Louisiana beaches, so it might be another thing we
can mention for some cooperation. I think some of the
Texas universities may already have a program underway with Mexico, but I am not positive about that.

DR. SANDIFER: One final statement on this. I think most of us who have dealt with these kinds of cleanup programs know that you get an awful lot of bang
for a very little buck, because most of the hard work is actually done by volunteers.

The financing that goes into making sure you have got a few coordinators -- all the necessary bags, the boats to get out to islands, and what not for the days that you do it -- the real work, the hard labor is done by volunteers.

In terms of expenditures, one gets an awful lot of cleanup value for the dollar. We may be able to find some statistics on that that helps make the point not only nationally, but internationally as well.

MR. KELLY: The Ocean Conservancy deserves some kudos for probably having the leading program around the nation.

DR. SANDIFER: They sure do.

MR. KELLY: They have good statistical information on what has been found, I think, too. I am sure they would be glad to give us what we need.
DR. SANDIFER: I think we probably need to get that, and I imagine somebody will volunteer to make sure we do get it. It is exactly the sort of thing we need to have in this report, and it is the sort of thing that
people see.

MR. KELLY: Thank you.

MR. EHRMANN: Very good.

Staff, any comments or questions here?

THE STAFF: (Shaking heads.)