



1900 W. NICKERSON ST., SUITE 207  
SEATTLE, WASHINGTON 98119  
TELEPHONE: (206) 285-3480  
FAX: (206) 283-8263  
Email: nrc@nrccorp.com

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Admiral James D. Watkins, USN (Retired)  
Chairman  
U.S. Commission on Ocean Policy  
1120 - 20<sup>th</sup> St., NW, Suite 200 North  
Washington, DC 20036

RE: Further Comments Regarding Ecosystem Management

Dear Admiral Watkins:

I wish to thank you and other Commissioners who are involved in the work of the Commission on Ocean Policy for the opportunity to present my views at the hearing held in Seattle, Washington, June 13 and 14, 2002. I am acutely aware of the importance of your work and its potential to influence the character and direction of this nation's ocean related activities over the next several decades. My presentation dealt with only a small portion of the scope of the mandate given the Commission, but I believe it dealt with several important issues that could influence the success of fisheries management in the future.

As a result of my oral presentation, several of the Commissioners requested that I elaborate on two matters presented in my written presentation. They include (1) means to improve the Councils' performance in establishing sustainable Total Allowable Catches (TACs) of species under federal management; and (2) my concern regarding the potential confusion over the goals and objectives of so called ecosystem management and or management using

ecosystem principles. In response to this request the following additional comments and suggestions are provided.

1. Increasing the authority of the Councils' Scientific and Statistical Committees in regards to establishing ABCs.

In my previous statement on June 13, 2002, it was noted that use of the Scientific and Statistical Committees (SSC's) have varied between Councils and that in some regions the SSCs did not even meet at the same time as the Councils. As a result it was difficult for these SSC groups to establish a working relationship with user groups and other parties interested in the science that is used to guide the Councils in establishing authorized yields. As the Councils currently function, they constitute advisors to the Secretary of Commerce, and the SSCs are advisors to the Councils. The ultimate proposed TAC for a particular species, under this arrangement, may or may not be in accord with the SSC's recommendation.

The original intent of those who helped draft and engineer the FCMA was that the SSCs would be the genesis of recommendations concerned with establishing sustainable yields. These committees would receive, interpret and evaluate status of stock data submitted to them by state, federal and academic sources. It would seem if we wish to insure greater compliance with SSC recommended Allowable Biological Catches (ABC), then the responsibility of establishing annual authorized ABC's or ABC ranges should be vested in the SSC. If Council members felt that there were extenuating circumstances, involving ecological, economic, or other societal issues that would allow a TAC greater than the proposed ABC, it should have the opportunity to plead its case to the Secretary of Commerce for relief.

There, of course, is the additional problem of the politics that may surface at the Secretary level of government. I don't believe that in the current environment, where the conservation and environmental community is so strong, that overturning an SSC ABC recommendation to replace it with a higher value would be likely, unless the Council made a very good case for the requested increase. Nevertheless, over the long haul perhaps some sort of ad hoc technical review group should be available to the Secretary to add credibility to his decision.

Finally, there is the problem of dealing with a Secretary's denial of a proposed management plan. As I understand the current situation, if a Secretary turns down a management plan, management is placed in limbo until the Council submits needed amendments. The Secretary cannot replace it with an interim plan. This leaves the Secretary in a very vulnerable position. It seems only logical that if a plan is turned down for failure to meet biological or ecological requirements of the law then the Secretary must have the authority to establish an interim plan.

2. Potential confusion over the goals and objectives of so called ecosystem management or managing using ecosystem principles.

Over the past several years there has been a great deal of talk about the importance of implementing ecosystem-based management. The issue has been the topic of a number of seminars, meetings, etc. at the national and international level. Regardless of the attention given this subject there remains considerable confusion over terms being used to describe the state of ecosystems as well as the goals and objectives of what is being defined as a management paradigm shift. You made reference to ecological jargon. A recent Director of one of the nation's largest NMFS Research Centers adroitly applied the phrase "terminological inexactitude" (I believe it's a phrase used by Winston Churchill) when commenting on the debate over defining the state of ecosystems and the goals of ecosystem management.

I believe before we make any national commitment to move down this path we should clearly understand what we expect to achieve using ecosystem principles and what we expect to manage in order to arrive at stated goals. As far as I know the vast majority of scientists promoting management using ecosystem principles are not looking attempting to manipulate the ecosystem to achieve selected output desired by society, but are merely promoting management that takes into account the range of human impacts that are affecting ecosystems processes and the goods and services they provide. In fisheries this means understanding the effect of fishing on target and non-target species as well as their habitat. In general the Marine Mammal, Endangered Species, and the MSFCMA Acts spell out these obligations and should be seen as fundamental components of managing using

ecosystem principles. However, in some circles the identified goals seem less tangible and it is not clear how certain noted objectives will or could be achieved.

As commented on in my June 13 statement, "In an announcement of this year's Mote Foundation seminar on this subject, the planners note that implementation of ecosystem management will involve specification of additional constraints in elements of fishery management policy to effect preservation of biodiversity, habitat integrity, and trophic structure". These are very general terms and it is not at all clear how the attributes of these ecosystem properties can be measured (quantified) and what qualities need to be preserved.

The following questions or issues need attention:

1. What is the likelihood that any level of fishing can be carried out without altering biodiversity, particularly as it is broadly defined? Species, genetic, and population aspects of biodiversity are in constant flux even in ecosystems not affected by human activity. I have no idea how we expect to define the range of accepted change in various components of biodiversity.
2. Scientists have described trophic levels for the various biological components of ecosystems based on their feeding patterns and how far they are removed from basic productivity. Impacts and processes are often described from a bottom up or top down process, but what is it that we expect to preserve? The structure itself? The biodiversity of the trophic levels? The quantities of material that are transferred between trophic levels, etc.?
3. Accepting the fact that all fishing carried out on the seabed results in some alteration of the seabed physical structure and may reduce the biodiversity of invertebrate populations in the areas fished, what are the levels of change (biological and physical) that are acceptable in terms of the maintaining of the ability of the systems to produce the desired goods of the impacted ecosystems?

Successful management of our natural resources employing ecosystem principles may well depend on society's ability to specify and agree on desired characteristics of various ecosystems and the expected levels of products they should produce. This will not be an easy task. As I noted in my June 13 presentation, I suspect that one of the unexpected consequences of the push for ecosystem management may be the

adoption of policies and implementation of management based not on what we know, but on uncertainty and the precautionary principle coupled to ecological generalizations regarding the impacts of fishing on ecosystems. If the goals and objectives cannot be explicit and quantifiable, then litigious sectors of our society may find fertile grounds and we may see a significant amount of ecosystem management played out in the courts.

I hope these added comments will be of value. I have enclosed copies of a recent lecture presented at the UBC concerning the issue of overfishing and the political dimensions of decision-making as well as a draft talk to be presented to the Mote foundation this fall. They may be of interest to the Commissioners.

Sincerely,

NATURAL RESOURCES CONSULTANTS, INC.

Dr. Dayton L. Alverson  
Senior Scientist

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