Remarks: Biodiversity and a Word of Caution

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Biodiversity—it is everywhere—in the popular press, the light journals, the halls of Congress, international conventions, and at panel discussions—even as we speak. It is ubiquitous—the current "in" thing, the new byword of the environmental movement. Some of the major resource agencies have even adopted it as a major goal!

Is it deja vu—or have I been missing something?

Be that as it may, I want to point out that biodiversity is not new—it has been with us a long time; that fish and wildlife managers are not its detractors but, in fact, its pioneers and current advocates. But to end on a word of caution, my comments do not necessarily represent the views of the International Association on this subject, and my remarks relate primarily to the United States, with emphasis on fish and wildlife resources and their management. For convenience, I abbreviate "conservation of biodiversity" to "biodiversity."

There are many definitions of "biodiversity." Most embrace the idea of preserving the world's varied animal and plant resources.

Quite simply, I take the concept of biodiversity to mean the intelligent application of applied ecology—ecology expanded to include socio-economic factors. Webster defines ecology as "the branch of biology that deals with the relations between living organisms and their environment." I interpret living to include man, and his influence and needs to be part of the environment.

Before going further, I want to state three personal convictions:

First, the earth's biological diversity must be sustained.

Second, the successful application of the biodiversity concept will require that the human impact and man's needs and requirements figure into the equation.

And third, the successful application of the biodiversity concept will require carefully planned, knowledgeable, and flexible management—sometimes intense—to ensure that specific biodiversity objectives are achieved.

The concept of biodiversity—the application of basic ecology—has been at the heart of academic education for resource managers since its inception; it is to be

found in the bylaws or objectives of The Wildlife Society, the American Fisheries Society and the Society of American Foresters, and historically it has been and is being applied by resource managers.

Fish and wildlife managers, and the Indians before them, have understood the importance of manipulating the normal ecological succession to increase diversity—fire, mechanical clearing, revegetation, the value and productivity of the edge effect. In fact, for the last 50 years, a large portion of Federal Aid to Wildlife Restoration funds have been spent on various forms of habitat manipulation.

Modern-day management employs the entire array of many tools: protection of animals such as ferrets and eagles, reintroduction of others, such as antelope and bald eagle, research on contaminants and behavior, acquisition of crucial habitats, and many others: individual measures which either protect or re-establish biodiversity. And, all designed to apply specific measures to fit specific situations in specific locations which have collectively contributed to a goal of national biodiversity.

Early Awareness

The awareness of early conservation leaders was receiving national attention in the late 1880s as the Boone and Crockett Club and others pressed for refuges, forest reserves, and parks. President Benjamin Harrison created the first national wildlife refuge on Afognak Island, Alaska, in 1892 and Teddy Roosevelt the first bird sanctuary on Pelican Island, Florida, in 1903, the beginning of the National Wildlife Refuge System. The national forest system had its beginnings in 1891. And, with the protection of Yellowstone in 1884, the national park system came into being. Finally, in 1972, Congress passed legislation authorizing marine sanctuaries.

From these rocky, uncoordinated, conceptual beginnings has evolved the present custodial systems of National Parks and Forests, Wildlife Refuges, Marine Sanctuaries, Wild and Scenic Rivers, along with similar state systems, all embracing the concept of what is now being called biodiversity.

It is also of interest to examine the purposes of a few specific authorities:

—The Multiple Use Act of 1960 authorized and directed the Secretary of Agriculture to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield and defined multiple use to include "all the various renewable . . . resources."

—The National Environmental Policy Act of 1969 included a Congressional declaration of purpose:

"to encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation"

The Endangered Species Act of 1973 had as its purpose:

"to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved"

The North American Wetlands Conservation Act of 1989 has among its purposes:

"to protect, enhance, restore, and manage an appropriate distribution and diversity of wetland ecosystems and other habitats for migratory birds and other fish and wildlife in North America"

There are many, many more. Clearly, conservation leaders, resource managers, and Congress have long embraced and given meaning to the concept of biodiversity. It is important to note that each of these statutes, in addition to their brief statements of purpose, contain definitions, conditions and implementing instructions, giving recognition to the many needs and interests involved—and the implementing regulations are all developed by due process.

It all adds up to the encouraging fact that an interrelated system of lands and waters, agencies, and implementing policies and regulations have evolved, all carefully crafted, developed, and tested, for over a century.

A working system that is the envy of the world, despite its shortcomings and the need for continued methodical improvement.

Current Legislation

Nevertheless, there is now a bill before Congress, the National Biological Diversity Conservation Act (H.R. 2092), which defines biological diversity to mean "the full range of variability among living organisms and the natural communities in which they occur" and declares it to be "the policy of the United States that the conservation of biological diversity is a national goal." Not many would quarrel with the purpose—it is consistent with earlier Congressional intent.

But, and I emphasize the but, it too contains many provisions, some of which would create new authorities and superimpose new, umbrella requirements over the century tested pattern of authorities that make modern-day management possible.

There is the very real possibility that the end result would be so cumbersome, complicated, and restrictive as to limit common sense and needed flexibility in management measures designed to assure biodiversity—the intelligent application of applied ecology.

My point, obviously, is that we do not need a national biodiversity bill.

The Convention on Biological Diversity

Now, the United States is considering whether to be a party to a Convention on Biological Diversity, the objective of which is "to conserve the maximum possible diversity for the benefit of present and future generations and for its intrinsic value." Some proponents of the convention are hoping that it will be acted upon in June 1992 in Brazil.

Again, the objective is commendable; I do not intend to comment in detail on the many provisions in the 30-page, single-spaced second draft. Suffice it to say that there are many definitions, conditions, mechanisms, and other provisions to require

ratifying nations the world over to take specific steps to assure biological diversity as defined and agreed to by the negotiating committee. And, that there are profound implications for the United States.

What I do want to dwell on are the implications of a convention, once ratified by the United States. I do not believe conventions are well understood. Bear in mind that in the United States, a ratified convention becomes the law of the land, preempting conflicting statutes. And in the U.S. system of shared federal-state responsibility, a convention preempts state authority. Responsibility for enforcement is with the federal government and adjudication is by the courts. Implementation is by the convention's international secretariat and decisions are made by vote of the assembled representatives of member nations.

The United States takes international conventions and their enforcement very seriously, more so than many nations having an equal vote. Also, the United States sends professional managers as part of its delegation; many nations do not.

In short, a convention is a very serious thing—far more than a statement of intent. It is imperative that it not undermine state and federal authority to carry out needed programs; that it not supercede other successful international arrangements such as the Migratory Bird Convention of 1916 and a number of marine mammal conventions; and that there be beneficial results for U.S. resources.

That is why the definitions, terms and requirements are so important. That is why conventions must be signed by or for the President and ratified by the Senate. And, that is why we, as professionals, administrators, and conservationists need to know exactly what we are doing before we jump on the bandwagon. A convention should have positive benefits for the United States or not be ratified. Failure to conclude the Convention in June 1992 is not an environmental failure; rather, it could provide the opportunity for long-term improvement.

That leads to my caution. I think all professional fish and wildlife managers endorse the concept of biodiversity and encourage its application. But when efforts are made nationally and internationally to institutionalize an idea or concept, we must know what is intended and how it will be accomplished.

The definitions of biodiversity are really quite similar but mean entirely different things to different interests. The term "biological diversity" is an old, well-established ecological term. Whoever shortened it to "biodiversity" was a public relations genius—a movement was coined.

Indeed, we all know intuitively what it means. What we do not know is what is intended and proposed by its many diverse activist proponents. Precise definitions, terms, and conditions are imperative, especially when an agency finds itself in court to determine whether it is in compliance. There is a vast difference between the slogan, bumper sticker phase, and the reality of implementation.

The Biodiversity Shield

It would seem that some of the biodiversity activists would like to have the humans butt out. Among these are some protectionists, anti-managers and animal

rightists who find shelter under the new and legitimate banner of biodiversity. There are some very radical measures being proposed very seriously.

Very specifically, what does it mean for fish and wildlife management?

Professionals, administrators, and conservation leaders have a responsibility to look at proposals scientifically, with hard-nosed realism, and to apply a century of experience—to guide and lead the enthusiasm of a popular groundswell, not to follow it.

Application of Biodiversity

And how is it to be applied—on what geographic scale and what scale of species? To all classes of land and water? To all species? Who will determine priorities? What about single species management? Again, what is the role of the human species?

Obviously it will not apply to Manhattan—not even to Aransas National Wildlife Refuge. Aransas is not a biodiversity area. It is managed for the exclusive well being of whooping cranes to assure that the cranes will always be part of this Continent's biodiversity. And so it is for many endangered forms, reducing competition and predation and other forms of natural mortality.

Let us look at some of the realities.

Biological diversity is a biological condition, not a static condition; its maintenance goes beyond biological considerations and requires flexible, often intense management with full recognition of the socio-economic influences.

As a practical manner, biodiversity can only be achieved on a national scale and over the long term through management; and only by including human needs and requirements in any successful biodiversity equation. Any biodiversity movement that rejects intelligent management is doomed to failure.

Most biodiversity discussions give scant attention to the needs of man, except in very negative terms, with the exception of the recently issued Keystone Report.

And, in terms of management authority, I can tell you with absolute certainty that the terms of the second draft of the convention will gravely pre-empt management authority in the United States.

We must ask: Is broad legislation or an international convention in the best interest of U.S. resources? Or do they have the potential to hobble existing successful programs?

Make no mistake—the anti-management interests will use the biodiversity movement to advance their varied agendas nationally and internationally.

Clearly, many areas of the world need help. They need their own legislation, agencies, trained personnel, encouragement and support. Can this best be provided by convention or by other means?

From a U.S. standpoint, we have not done all that can or should be done to advance the concept of biodiversity. I believe that wildlife managers in this country would like to have the diversity of wildlife resources as part of the American scene, as part of our fabric and heritage; and, to the extent possible, on all classes of land

and water, both public and private. This requires the application of countless state and federal laws, cooperation, and intensive management measures. It has taken over a century to build this structure and it needs improvement. However, in our zeal to support a worthy objective, we need to make very sure that our future actions will serve to strengthen what we have; and, that fishing and hunting will be part of that future.