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The Endangered Species Act has desirable goals, but it also creates sharp conflict not only between development and conservation interests, but also among just environmental interest groups. In this article Eisgruber stresses the ethical justifications for both development and conservation, and suggests ethical underpinnings to improve the Endangered Species Act.

Sustainable development and species conservation, while not equally treasured by all parties, are generally perceived as worthy goals. Yet the literature, public debate, and legislation are often predicated on the premise that sustainable development and species conservation are conflicting goals. It has, for example, been stated that "the confusion over conservation policy is largely the result of the intrusion of economics . . . into what is fundamentally a question of ethics" (Hocutt, p. 384). Others are of the opinion that conservation policy should be entirely a matter of biology.

In this article I will advance the argument that conservation policy is not entirely a matter of biology and that it is not the "intrusion of economics" that leads to different points of view about conservation and development. Rather, the differences stem from the adoption of different environmental ethics by different groups of people which assign varying roles to economics, politics, science, human rights, institutions, and culture. The choice of environmental ethic has important practical implications with respect to formulation and implementation of legislation and public policy pertaining to conservation and development.

Sustainable development, ethics,

by Ludwig M. Eisgruber

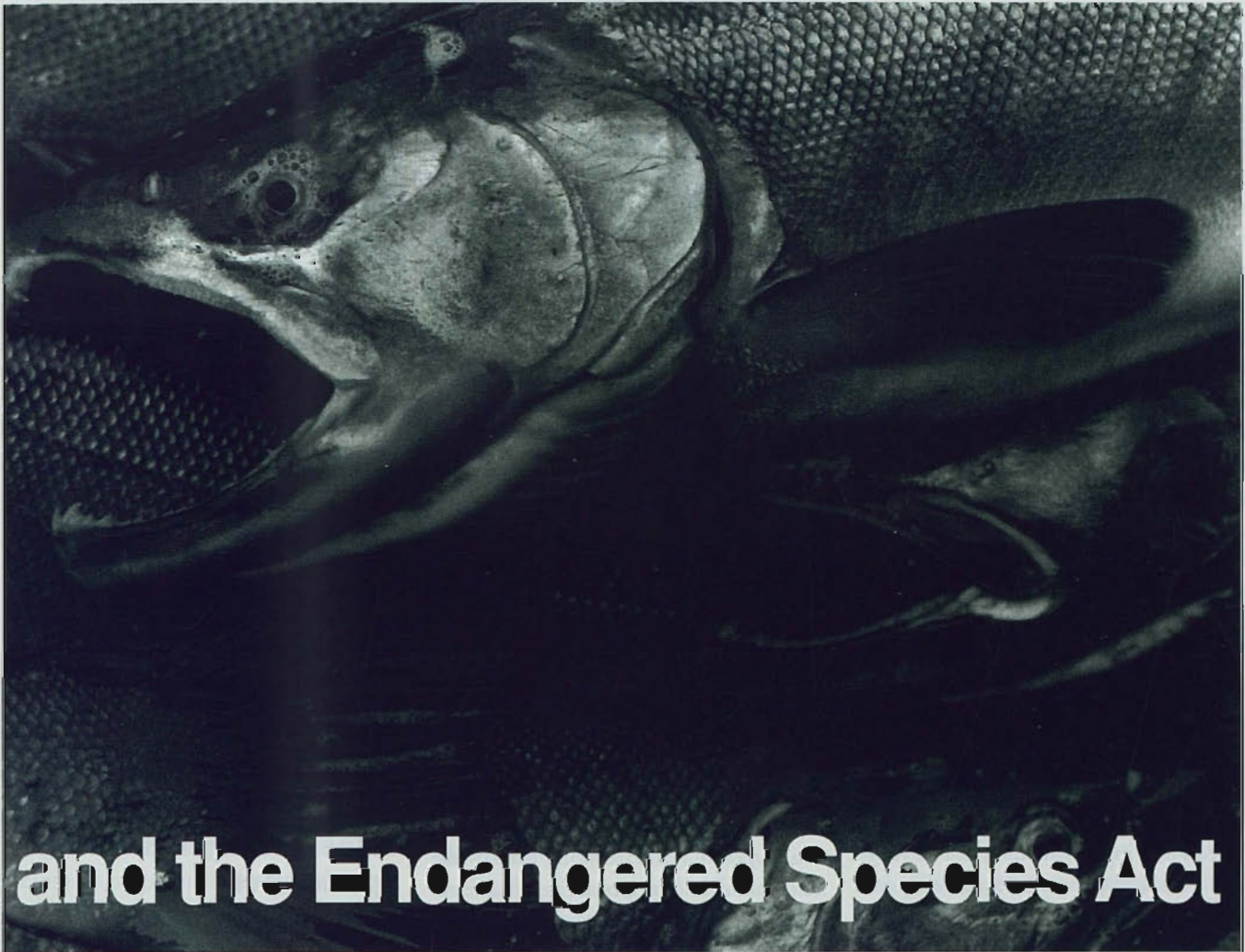
The concept of sustainable development

Sustainable development is taken to mean a positive rate of change in the quality of life of people based on a system that permits this positive rate of change to be maintained indefinitely. It is postulated that quality of life is determined by the magnitudes of the natural resource endowment, the cultural resource endowment, the technical resource endowment, and the institutional resource endowment. In order for the requirement of a continuing positive rate of change in the quality of life to be met, it is necessary that

the utility provided by the total amount of resource endowments (but not the utility provided by each type of resource endowment) transferred to succeeding generations be larger than was received by previous generations.

Some of the properties postulated by the above definition, in particular the one pertaining to a sustainable increase in the quality of life, may at first sight be objectionable to those who subscribe to a certain type of environmental ethic that submits that in the face of decreasing quantities of non-renewable resources it is not possible to have sustained development.

Ludwig M. Eisgruber is a professor in the Department of Agricultural and Resource Economics at Oregon State University.



and the Endangered Species Act

Issues pertaining to environmental ethics will be discussed later. However, it is useful to point out here that, given the available evidence, it is technically feasible to establish ecological and economic stability that is sustainable far into the future, so that the basic material needs of each person on earth are satisfied and each person has an equal opportunity to realize his individual human potential. The question of interest thus becomes, "Given that sustainable development is technically feasible, what policies and institutions will be required to realize it in practice?" (Howarth, p.17)

Ethical perspectives for sustainable development

The ethical perspective that forms the basis for the previously stated sustainable development concept must be made transparent, because perceptions of the "real world" and of "appropriate values" other than those implied by the sustainable development concept proposed here are frequently advanced. These differences in perceptions and values must be addressed, because they are the basic determinants of whether a particular concept of sustainable development is relevant and appropriate.

Two fundamentally different ethical perspectives (anthropocentric and ecocentric) from which the issue of sustainable development may be approached will be discussed.

The anthropocentric perspective

The principal tenets of the anthropocentric ethic are that

- (a) humans are responsible for understanding their role in the larger system and for managing it for sustainability;
- (b) interest in environmental protection, species conservation, and sustainable de-

velopment is based on legitimate and enlightened self-interest;

(c) human contributions in cultural, institutional, and technological development are acknowledged as being legitimate and important; and that

(d) there is a moral obligation that each generation pass on to the next a bundle of endowments which is at least as large as the endowment bundle received from the previous generation.

The ecocentric perspective

The beliefs that form the core of the ecocentric outlook are that

(a) humans are members of the earth's community of life on the same terms as other living things;

(b) humans are part of a system such that their chances of faring well or poorly is determined by their relations to other living things;

(c) all organisms are teleological centers of life in the sense that each is a unique individual; and that

(d) humans are not inherently superior to other living things (Taylor).

Which environmental ethic?

An examination of the ecocentric ethic reveals that its presumed factual and logical foundations pose serious difficulties to the implementation of the ethic.

First, in its more basic and purest form ecocentrism postulates that equal rights for all species must be recognized as a basis for environmental protection. At that level ecocentrism is unable to distinguish between, say, a tree and a human being. This inability leads to a separation of environmental policy from human rights and social justice.

Second, ecocentrism leads to the quest for conserving not only all species, but also subspecies, populations, stocks, and in its full interpretation and application, all organisms. "This is not defensible from the viewpoint of biology, nor is it practical unless a way is found to abolish death itself" (Gould, p.26).

Third, ecocentrism focuses on the



Columbia River Gorge

natural resource endowment in its most narrow sense. It does not see the possibility that because of cultural and institutional innovations of *Homo sapiens* (and the planet's own propensity for change) the planet's total resource base is neither fixed nor stable.

Fourth, ecocentrism overlooks the essential and positive relationship between development and conservation. Whether explicitly stated or not, the ecocentric view is fundamentally an anti-development view. Such a view is in conflict with evidence that people view the environment as a "superior" good (Kopp). Further, "development" implies growth in cultural and institutional endowments, including better understanding of and better institutional structures for managing natural resources. Thus, an anti-development perspective ironically aims to weaken precisely those types of (institutional, cultural, and economic) endowments which are amongst the prerequisites for environmental protection and conservation.

Finally, ecocentrism places humans in the awkward position of having to be at once a species that is not inherently superior to other living things, on the one hand, and supergod, on the other. The first of these is one of the core beliefs of the ecocentric perspective. The second follows from the notion that the human species is responsible for keeping all other species, if not organisms, from extinction.

The conclusion that emerges is that ecocentrism is a poor foundation for public policy, laws, and actions. Anthropocentrism, on the other hand, is a far more promising and appropriate underpinning.

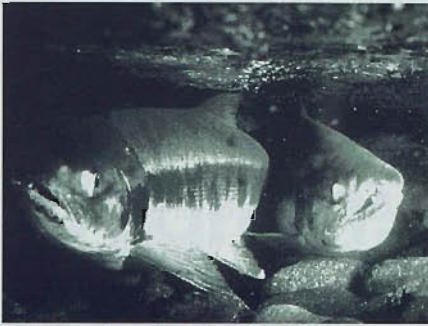
The ethical foundation of sustainable development

Sustainable development, as defined earlier, is consistent with anthropocentrism and inconsistent with ecocentrism. Fundamentally, sustainable development views persistent improvement in the quality of human life to be the primary objective. Maintenance of a sustainable natural environment is considered to be essential and in the best and justifiable human self-interest. However, neither anthropocentrism nor sustainable development limit their scope to natural resource endowment only, but include cultural, technical, and institutional endowment in their definition of resource endowment. Sustainable development is the *sine qua non* of conservation, and "the greater economic growth, the greater the demand for environmental protection and preservation" (Kopp, 1992, p.10).

The ethical foundation of the Endangered Species Act

Not surprisingly, the Endangered Species Act (ESA) of 1973 is not entirely based either on anthropocentrism or on ecocentrism. Nevertheless, provisions of the ESA can be explained only if premised on a predominantly ecocentric ethical view. The act strives for conservation of every species. In fact, by introducing the language of "in its range," the act strives to protect not only species but populations and—as in the case of the Snake River salmon—even local stocks. (Any subsequent reference to "species" in the context of the ESA is to be viewed as including species, subspecies, populations, population segments, and stocks. Once identified as threatened or endangered, species are guaranteed strong protection.) The protective measures provided under

the act have led the Supreme Court to conclude that the intent of Congress was to stop extinction *no matter what the cost* (Tennessee Valley Auth. v. Hill, 437 U.S. 153, 1978).



Salmon headed upstream to spawn

The very Supreme Court decision which declared Congress' view to be that each and every species is invaluable prompted Congress to modify the ESA several times since 1973 to permit some flexibility in the implementation of the act with respect to balancing of economic considerations and species conservation. Nevertheless, the ethical underpinning of the ESA remains ecocentric both in theory as well as in practice.

Beneficial effects of the ESA

Despite the fact that the act's ethical underpinnings appear flawed and although legislators probably were unaware of the act's real world impacts when they passed it, the ESA has provided beneficial impacts from society's point of view. The strong language of the act and consistent court rulings in favor of endangered species had enormous impact on public awareness and public thinking. As a result, there is now a much better understanding of the need for environmental protection—and of the long-term costs of *not* protecting the environment. Such understanding is a vital precondition for meaningful legislation and for subsequent public support of such legislation.

The ESA stimulated thinking beyond species conservation to protection of the environment and the conservation of ecosystems. The futility of "single-issue (spe-

cies) politics" became apparent. Also apparent became the fact that current knowledge about and understanding of ecosystems is less than adequate to deal with the issues confronting us.

Finally, the ESA demonstrated that significant conservation measures are economically feasible, but also not without substantial costs. Often, but by no means always, these costs are lower than initially perceived. The significance of these costs, however, resides in their uneven distribution. This issue is not at all addressed by the act.

Implementation difficulties of the ESA

To a substantial degree because of its ecocentric orientation, implementation of the act has experienced a number of implementation difficulties. Supporters of the ESA are frequently viewed as being "anti-development." The first compelling indication that with the ESA of 1973 Congress might have passed legislation that has an anti-development bias came in 1978 with the Tellico Dam Supreme Court case. The dam was a Tennessee Valley Authority (TVA) project, and TVA argued before the court that its environmental impact assessment had passed two federal court reviews and that the snail darter existed elsewhere; thus was not endangered. TVA lost the case. It became clear that the nature of the act was such that even if judiciously used it could halt development as commonly understood. As subsequently used, some have argued that the act was invoked to frustrate development or at least for a primary purpose other than species conservation.

There are two related fundamental "rights issues" which are *de facto* impacted by the act but not addressed by it. They are the issues of *equity* and *property rights*. The equity issue arises because the cost of implementing the act tends to fall very heavily and disproportionately on small groups, while others reap the benefits. The act imposes no direct or relatively small costs on those who benefit from it, in-

cluding those who petition for listing of species. Property rights are an issue because of the act's potential to engage in *de facto* taking of property without just and fair compensation. This power of the act raises fundamental, perhaps constitutional, issues of property rights. It also raises questions about compensation.

In general, the act's mandatory near-indifference to economic effects can be so intimidating that local interests may dig into defensive positions and create obstacles for implementation of the act as well as species recovery.

An examination of the species selected for protection shows clearly that emphasis has been on so-called "glamour (or mega) species." Only a handful of these mega species has received most of the attention and most of the funds. In part, this is the consequence of the ecocentric philosophy embedded in the act that all species are of "incalculable value" and that both economic and technical resources are available to conserve all species. Reality, however, is that both economic and technical resources *are* limited. Triage decisions have had to be made, and they tend to have been made on the basis of popular appeal of species, in a sort of random fashion, and not on the basis of biological importance, likelihood of success, or economic effect.

Potential Improvements of the ESA

Extensive litigation, a long back-up list of candidate species, almost exclusive attention to glamour species and lack of appropriation of funds for implementation are but a few indications of the possibility of improvement of the act.

The act's current provision to protect species, subspecies, and population segments within distinct geographic regions has the potential of being immensely costly, is biologically indefensible, and—above all—counterproductive. Current law requires conservation of species at all costs even if it is almost certain that they cannot be saved and even if it is evident

that as a result of anticipated, if not known, unsuccessful efforts to save some species others will perish along with the first. Such provisions are unrealistic and should be eliminated. Arguments have been advanced (e.g., Solow) that all species should not be viewed as equal. Economics can play an important role in this process of choice and must be given a greater role in it.

Economics should be considered in the act in yet another way, namely, to eliminate the act's insensitivity with respect to inequitable distributions of costs and its potential for encroachment on property rights. Provisions for fair compensation for transition and other costs incurred or property lost or depreciated as a result of implementation of the act should become part of it. Some scholars (Burtraw) have advanced arguments that it may be in the best interest of the public to provide compensation even if a particular group has no "legal right" to compensation. Such compensation will enhance political support for legislation which would otherwise be distasteful.

Other areas of improvement pertain to reduction in the uncertainty of outcomes inherent in the act, more emphasis on eco-system rather than single species conservation, increased opportunities for science and private enterprise to provide eco-system management solutions, and a substantial streamlining of the process—particularly with respect to litigation.

Summary and conclusion

Above it was argued that the demand for conservation of the environment is linked to sustainable development. The ethical foundation of sustainable development was identified as anthropocentrism. It was, further, pointed out that the ethical foundation of the ESA of 1973 is fundamentally ecocentric. Assumptions which are contradicted by fact and internal inconsistencies of ecocentrism were identified. It was concluded that ecocentrism is not a useful undergirding for legislation and



Baby eagle

public policy, and that the ecocentric orientation of the act is the root cause of its implementation difficulties and its "anti-development" aura. Potential improvements to the act and the important role of economics were identified.

In concluding this discussion it appears of some importance to note that the concern over species conservation must be viewed in a much broader context. If this does not happen, history may well identify the enormous efforts at species conservation as winning most battles but losing the war. No intensity of wishing will make the human species vanish. Indeed, it is all but certain that the size of that species will nearly double from the present 5–6 billion to around 11 billion in about 30 years. Most of this population growth will take place in poor countries in parts of the world with the richest pools of species. Poor, hungry, sick, and uneducated people have a well-developed *disinterest* in species (and environmental) conservation or noble causes such as saving the planet. Through their very existence, numbers, food and fuel needs, and economic predicament, they impact unfavorably on soil, water, forests, and the atmosphere. This may result in the ex-

tinguishment of far more species than can be conserved in developed countries by even most optimistic expectations. In addition, variables other than population growth—such as global warming and acid rain—could well lead to the conclusion that species conservation, as provided for by the act, has very myopic visionary qualities. Sustainable development at regional, national, and international levels—and based more nearly on an anthropocentric ethic—emerges as the broader and far more fundamental issue. A revised ESA should at least be philosophically in line with this more comprehensive and more compelling outlook, and to be in line with this more compelling outlook requires that economics play a far more prominent role than in the past. ■

■ For more information

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