
Science

Each science agency is to America what a CAT-Scan is to a patient. Both examine the living body in a way that is painless, safe, essential and non-invasive. They diagnose problems early, quickly, accurately, and impartially, and then allow decision makers to act on the data they provide. Without them, decision makers would have to resort to old-fashioned, expensive, and risky



Researchers from the U.S. Bureau of Mines and the Maryland State Government inspect a manmade wetland, designed by the Bureau to keep acid-mine drainage from polluting nearby rivers and streams.

judgement calls like "exploratory surgery."

Conflicting Missions and the Need for Science

We are now at a moment of transition for American resource management. We are finally both ready and able to use the best tools of modern science to call forth a very different vision for the future. It is a vision that says we need not choose between economic growth and environmental protection - one living at the expense of the other.

From its inception, the Department of the Interior has been charged with a conflicting mission. One set of statutes demands that the Department must

develop America's lands, that we get our trees, water, oil and minerals out into the marketplace. Yet an opposing set of laws orders us to conserve these same resources, to preserve them for the long-term, and to consider the non-commodity values of our public landscape.

What we're learning, thanks to modern biology and a more reasoned and thoughtful understanding of the landscape, is that we cannot protect the splendor and biological diversity of the natural world by simply fencing off a few protected areas within an overall landscape of exploitation. The lands we manage simply do not fit into neat compartments. For example, Everglades National Park is dying because forces outside the park are affecting the hydrological flows so essential to the ecological health of the Everglades. Likewise, migratory wildlife doesn't stay within the boundaries. Some birds migrate across the North American continent and some, like the Arctic tern and a few of the plovers, all the way down to the tip of South America.

Resolving the dichotomy between rapid exploitation and long-term protection demands the use of science -- interdisciplinary science -- as the primary basis for land management decisions.

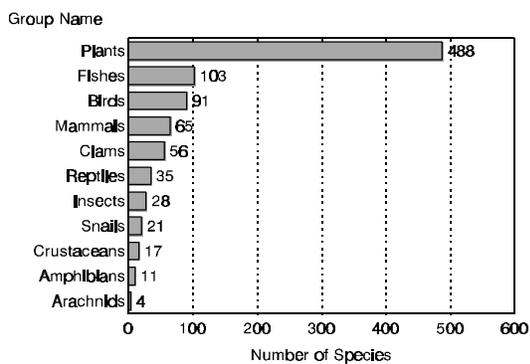
For example, the Pacific Northwest Forest Plan had to both protect the old growth forest system and avoid repeated crises in the future. Just as importantly, the plan had to address the economic future of timber dependent communities in Washington, Oregon and California. The Forest Plan provides biological diversity and sustainable economic activity across the entire landscape. The final landscape plan, mapped out by teams of scientists from myriad sources, and constructed bit-by-bit using modern geographic information technology, has no precedent on this scale. It marks the beginning of a new, "applied science of landscape conservation," using the tools of many sciences to find an acceptable balance between human communities and nature.

Recent indicators offer encouraging examples of how these measures are taking hold: the unemployment rate in Oregon is now at its lowest point in a generation.

Science and Regulation

The Department's science bureaus, U.S. Geological Survey, National Biological Service and the U.S. Bureau of Mines, respond to natural hazards, understand the complex biodiversity of the Nation's fish and wildlife, and find new ways to treat past abuses of public lands in terms of hazardous wastes. These bureaus do not have land management or regulatory responsibilities. It is precisely because of

Number of U.S. Endangered & Threatened Species



this that they can provide objective earth science and biological information from an unbiased, national perspective -- information that is trusted and depended upon by decision makers in the private and public sectors. Rigorously established standards are consistently applied to the generation of data, including both sample collection and analysis. The data are maintained in easily accessible data bases.

Some feel that government scientists, being human, are sometimes biased toward the attitudes of regulators who supervise them. The best way to counter any such inclination is quite simple: keep scientific research a step removed from the regulatory process. That is what we have done at the Interior Department; this was the rationale for

creating the National Biological Service and insulating it from regulatory bureaus.



U.S. Fish and Wildlife Service Director Mollie Beattie releases "Hope", a Bald Eagle rehabilitated after suffering a broken wing. The release of "Hope" at Blackwater National Wildlife Refuge in Cambridge, Maryland marked the Service's July 1994 proposal to reclassify most of the country's Bald Eagles from endangered to threatened.

In addition, science must be subject to peer review. The Interior Department is working to establish a stronger tradition of peer review for government research, in the best traditions of American science. Outside peer review has long been an integral part of the work of the Geological Survey, and is now being emphasized more and more at the Bureau of Mines and the National Biological Service.

The science bureaus of the Department save the nation far more money than they cost. The National Biological Service costs each American 5 cents per month. The U.S. Bureau of mines costs another nickel. The U.S. Geological Survey costs 17 cents per month. For less than the cost of a pack of gum, Americans invest an ounce of prevention toward safer homes, roads and buildings, cheaper minerals and insurance, cleaner water, air and soil, and healthier populations of plants and animals.