

A Few Excerpts from Scientific Community Reports on Science and the ESA

In recent years, the scientific community has taken at least two comprehensive, general looks at how the regime for consideration of science in the ESA is working: “Science and the Endangered Species Act,” a 271-page report by the National Research Council of the National Academy of Sciences; and “Strengthening the Use of Science in Achieving the Goals of the Endangered Species Act” by the Ecological Society of America, one of the largest scientific societies in the country.* The following are just a few excerpts from these much more comprehensive documents.

Loss of Biodiversity

“The nation’s biological diversity has great economic, aesthetic, and spiritual value.” Ecological Society of America 3.

“The current extinction event differs from extinction events in the fossil record in being less selective, i.e., it actually or potentially involves all taxonomic groups of organisms. . . . [T]he current extinction rate appears to be significantly greater than background rates.” NRC 39.

The Current ESA and Its Scientific Regime

“The ESA is the broadest and most powerful law to provide protection for endangered species and their habitats.” NRC 1.

“In general our committee finds that there has been a good match between science and the ESA.” NRC ix.

“The Act is a powerful and sensible way to protect biological diversity. . . . If the valuable scientific knowledge that has accumulated over the past several decades of analytical ecologic research is used to the fullest extent, the Act can become an even more powerful tool in achieving the societal goals for which it was enacted.” Ecological Society of America 3.

“Although it is difficult to quantify the effectiveness of the act in preventing species extinction, there is no doubt that it has prevented the extinction of some species and slowed the declines of others.” NRC 4.

“This report reviews scientific issues related to the ESA. The overall conclusion is that the ESA is based on sound scientific principles.” NRC 4.

“The more high quality science is used, the more effectively and more efficiently the Act can achieve the important goals society has asked it to accomplish.” Ecological Society of America 5.

“If the best available science is used consistently, common patterns will emerge and species protection and recovery will become more cost-effective.” Ecological Society of America 9.

“Many of the conflicts and disagreement about the ESA do not appear to be based on scientific issues. Instead, they appear to result because the act – in the committee’s opinion designed as a safety net or act of last resort – is called into play when other policies and management strategies or their failures, or human activities in general, have led to the endangerment of species and populations.” NRC 202.

“Biologists in the agencies responsible for implementing the Endangered Species Act generally try to use the best scientific information and methods available. Failure to use the best available information and methods is generally due to inadequate budgets and overworked staff.” Ecological Society of America 9.

“[E]ach PVA should include an analysis of the best available information on the focal species. Most PVA analyses combine data from field studies with simulation modeling of the possible impacts of various extinction factors.” Ecological Society of America 7.

Importance of Section 7 Jeopardy Consultations

“The Section 7 prohibition of any federal action likely to jeopardize the continued existence of an endangered or threatened species or to destroy or adversely modify its critical habitat is the source of much of the act’s power.” [This is often referred to as the consultation requirement, since FWS or NMFS consult with federal agencies considering such an action.] NRC 20.

Damage from Delays

“For species deserving protection, delaying the decision to provide protection and recovery will bring most of these vulnerable species even closer to the brink of extinction, restrict the options available for achieving recovery, and increase the eventual cost of the recovery process.” Ecological Society of America 5.

“When a species is listed, the Endangered Species Act requires that a recovery plan be developed. The ultimate goals of the recovery plan is to improve the status of the species in its natural habitat to such a degree that it can be delisted. However, by the time a species becomes eligible for listing, its habitat is often destroyed or badly degraded, the population is decimated, and its genetic diversity seriously eroded. Additional delays in developing and implementing recovery plans further imperil the species.” Ecological Society of America 4.

“The uncertainty that may result from sparse information is part of the risk that is evaluated during the listing process. Adding independent peer review of other administrative processes to the listing process would unnecessarily lengthen the time to make a listing decision without providing any substantial benefits. The major problem with the listing process has been its slowness, not inadequacy of the quality of the listing decisions.” Ecological Society of America 5.

Burden of Proof

“If the burden of proof were to show that an action would not harm a species rather than to show that it would harm a species, increased protection would result. The importance of shifting the burden of proof this way has been widely recognized . . . and is known as the ‘precautionary principle.’ . . . This principle has already been endorsed in several international legal documents.” NRC 169.

* Copies of the National Research Council report, ISBN 0-309-05291-2, can be ordered from the National Academy of Sciences Press, 202-334-3313. The Ecological Society of America report is available via <http://www.esa.org/whitepapers.htm>.