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A constructive approach to environmental valuation

Robin Gregory ^{a,*}, Paul Slovic ^b

^a Decision Research, 1124 West 19th Street, North Vancouver, B.C., Canada V7P 1Z9

^b Decision Research, 1201 Oak Street, Eugene, OR 97401, USA

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1. Introduction

The modern era of environmental policy in the United States dates back only 25 years, to the controversial passage of the National Environmental Policy Act and the Clean Air Act in 1970. Today, environmental policies are once again under intensive scrutiny and review. The lengthy discussions in Congress over revisions to the Endangered Species Act and the Clean Water Act, press coverage of the federal superfund program, and the many litigations stemming from claims for resource damages all provide evidence of this debate.

Central to this renewed controversy are concerns about tradeoffs among the diverse impacts of environmental policies. Economic effects form an important component of these impacts, and calculating them can pose serious challenges. However, many of the most troublesome problems for policy makers and resource managers arise in assessing the non-monetary impacts of environmental policies in a way that is theoretically justified and acceptable to stakeholders.

The emphasis on assessing nonmonetary impacts underscores a major shift in federal environmental policy guidelines over the past decade. These guide-

lines now require, as part of environmental assessments, explicit evaluations of human health, ecological, and social impacts that may have economic implications but are not typically sold in markets or measured in dollar terms. Such non-market, or amenity, impacts include improvements in visibility or aesthetics, protection of threatened plant or animal habitats, and health benefits. Even so-called passive use or nonuser benefits, which include the value of simply knowing that a species or wild area exists, can legitimately be included. Although this broadening of target impacts is both reasonable and widely supported, policy evaluations are now floundering on the difficulties of assessing such impacts.

2. Valuation approaches

Conceptually, there are several solutions to the problem of valuing non-market environmental effects. Because dollar payments are often used as an indicator of value, one approach is to express non-market values in dollars. If such monetary expression is successful, integration of these values with other economic impacts is straightforward. This approach, a natural extension of the principles of welfare economics and cost-benefit analysis, is the dominant paradigm in use today for evaluating environmental policies.

* Corresponding author.