

## **UCSD economists receive grant to study government methods for gauging public opinion on environmental amenities**

**March 11, 1996**

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A \$265,000 grant from the National Science Foundation and the Environmental Protection Agency Partnership for Environmental Research has been awarded to UCSD economists Richard Carson, Theodore Groves, and Mark Machina to study various approaches used by the federal government to gauge public preferences for environmental amenities such as clean water in rivers and lakes, wildlife preserves, and clean air in large cities and national parks.

According to Carson, the two-year project will include an examination of a variety of approaches for determining public preferences, including contingent valuation, one of the most commonly used methods by the federal government to put an economic price tag on environmental amenities. Contingent valuation, a survey-based approach pioneered by Carson and other environmental economists, looks at how people make trade-offs between the provision of environmental amenities and higher taxes through direct government provision or higher prices through regulation.

Contingent valuation and other non-market forms of assessing value play a key role in determining the costs and benefits of government environmental policies because many environmental amenities such as clean air and clean water are not directly bought and sold in the marketplace. As a consequence, said Carson, simply adding up the costs and benefits from market transactions related to an environmental amenity can substantially underestimate the public's value of the amenity.

"The results of this work should be of substantial use to researchers and others seeking to determine which surveying method they should use in different situations to best elicit information about environmental risks and damages from members of the public," said Carson. "We also hope that our work helps to strengthen scientific knowledge about contingent valuation methods, and helps to expose errors in arguments made both for and against the use of these methods."

Carson was the lead economist retained by the state of Alaska to assess the environmental damages of the Exxon Valdez oil spill to Alaska's natural environment. He has also worked for a number of other state, federal, and foreign government agencies to assist them in assessing policies concerning air quality, water quality, national parks, and wildlife. In this work, he designed numerous public surveys to collect data on public preferences concerning the provision of specific environmental amenities. Groves is an authority on public economics, public choice, and incentive problems in large organizations. Machina is a specialist in economic behavior under risk and uncertainty.

According to Carson, the project will examine the various methods of elicitation used in survey questionnaires, such as direct, open-ended questions asking respondents if and what they would be willing to pay for a change in an environmental amenity, for example, and what certain types of questions might inadvertently reveal to a respondent.

Two additional UCSD faculty members with expertise in public opinion surveying methods will serve as consultants to the study: political scientist Arthur Lupia, and cognitive psychologist Craig McKenzie. Other consultants to the project include: mathematical psychologist Duncan Luce, UC Irvine; marketing expert Jordan Louviere, University of Sydney; sociologist John Krosnick, Ohio State University; and sociologist Stanley Presser, University of Maryland.

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