

Economic Watch

Polls May Help Government Decide the Worth of Nature

By PETER PASSELL

How much is a Pacific sea otter's life worth — not someone's pet, but a wild animal that will never be studied by scientists or frolic in front of tourists? Could the Government find out by asking people in Plattsburgh or Peoria how much they would voluntarily fork over to keep the otter safe from unnatural hazards?

Until recently, such abstract questions have mostly been just for academic debate. But now Federal regulators are under orders from Congress and the courts to figure ways to measure losses to people not directly affected by environmental problems like oil spills or haze in national parks. The first set of guidelines, from the National Oceanic and Atmospheric Administration, is due later this month and is widely expected to support the use of survey-based techniques.

So with little fanfare, "contingent value" measurements of "passive uses" of the environment are on the verge of becoming an accepted tool in the making of public policy. They may also become a potent weapon in large pollution-liability suits.

For three decades, scholars and environmentalists have suggested that failure to account for benefits for "non-users" could lead to systematic underprotection. If passive uses are ignored, said Alan Randall, an economist at Ohio State University, it would encourage "the riskiest enterprises in the most pristine environments."

What is new is the ambitious use of opinion surveys to measure passive-use benefits. In 1989, a Federal appeals court ordered the Department of the

Interior to rewrite regulations for assessing damages under the Clean Air Act and the Superfund toxic-waste cleanup program. The loss of passive-use value, the court said, was to be included if it could be "reliably calculated."

The subsequent drive to bring survey-based measurement into the corridors of power is drawing praise from environmental groups and has even gained the cautious imprimatur of some prestigious scholars. "You can learn quite a lot from a well-done contingent-value study," said Robert M. Solow, a Nobel Prize-winning economist who is advising the National Oceanic and Atmospheric Administration on the use of such studies.

Bitter Division

But the approach has bitterly divided professionals. "Economists just don't want to admit there is stuff that cannot be measured," argued Zvi Griliches, a teacher of statistical methods in economics at Harvard University and a consultant to the Exxon Corporation.

Such surveys are anathema to industries that produce, use or transport toxic substances. If damages are measured by contingent-value surveys, warned Charles J. DiBona, the president of the American Petroleum Institute, "junk science will gain a companion — junk economics."

But plaintiffs in big environmental-damage suits suspect that a pot of gold is waiting under the contingent-value

Continued on Page 20, Column 1

Polls May Help U.S. Decide the Worth of Nature

Continued From Page 1

rainbow. The State of Alaska commissioned a \$3 million study of what Americans who will never visit Prince William Sound lost from the Exxon Valdez disaster, teasing out the numbers by asking more than 1,000 people in a random sample how much they would pay to avoid a similar accident over the next decade.

When pressed, the typical respondent put the figure at about \$30. The state thus inferred that Americans would collectively be willing to pay about \$2.8 billion. If that was true, Alaska argued, Exxon should be liable for \$2.8 billion beyond the billions spent to restore oil-soiled beaches.

While the survey drew praise from some quarters — Paul Portney, an economist at Resources for the Future in Washington, called it “far and away the best contingent-value study I’ve seen” — Alaska’s tactic was never tested in the adversarial setting of a courtroom; Exxon settled the liability suit for \$1 billion before the survey was introduced as evidence. But the sums at risk focused businesses’ attention on the threat posed to them by such surveys.

The oil industry, in particular, is sparing no effort to get across its message that contingent value is at best a gravy train for consultants, at worst a legal bomb that will blow apart the Great American Prosperity Machine. “If you applied this methodology to any human activity, you could stop it dead,” Mr. DiBona said.

Saying, Not Doing

Are the critics right? Most economists are indeed inclined to look at contingent value with a jaundiced eye. They have traditionally relied on market transactions to reveal value, and for an obvious reason: anyone who buys bananas at 39 cents a pound must think they are worth at least 39 cents a pound. Survey techniques, by contrast, are inherently limited by the fact that the conclusions are based on what people say they would do — not on what they have done.

To demonstrate that contingent value does not reveal what courts and policy makers want to know, Exxon hired an army of brand-name economists to test its mettle. While the sponsor’s bias must be kept in mind, the newly published research certainly does touch on a variety of widely acknowledged pitfalls in the technique.



Karen Jettmar/Gamma-Liaison

Federal regulators are under orders to find ways to measure losses to people who are not directly affected by environmental problems. In April 1989, after the Exxon Valdez spill in Alaska’s Prince William Sound, a Pacific sea otter’s coat was saturated with oil.

The oil industry is concerned over what it calls ‘junk economics.’

Peter Diamond and Jerry Hausman of the Massachusetts Institute of Technology point to the public’s inclination to be overly generous with hypothetical outlays. They note, for example, that a mail survey found 6.6 percent of fishing-license holders in Montana would be willing to pay to protect healthy water flow in two rivers. But just 1.1 percent selected randomly from the same group actually responded to a request for donations.

Wide Range of Responses

Another flaw is the extreme sensitivity of the results to the way the questions are asked. In particular, people seem willing to pay implausibly large sums if they are not careful-

ly reminded of the broad range of possible environmental damages and the practical limits of their own incomes.

Walter Mead of the University of California at Santa Barbara points out that one major study pegged the nonuse value of saving old-growth forests in the Pacific Northwest at \$119 billion to \$359 billion. Sparing the whooping crane from extinction was valued at \$51 billion to \$715 billion.

Tough Standards Proposed

Still another pitfall is the apparent irrationality of survey respondents. If a little preservation is worth something, both economic theory and common sense suggest that a lot ought to be worth a good deal more. Yet William Desvousges and a team of colleagues from the Research Triangle Institute in North Carolina found the public’s willingness to pay to save 2,000 migratory birds from oil-coated ponds — a well-documented pollution hazard — was as great as their willingness to save 20,000 birds or 200,000. “No matter how you skin this cat, you get incredible anomalies,” Mr. Hausman of M.I.T. concluded.

But practitioners are not about to fold their tents. "There are good contingent-value studies and bad contingent-value studies," insisted Raymond Kopp, an economist at Resources for the Future who worked on Alaska's study of Prince William Sound. "The technique works as well as any other empirical methodology."

And earlier this year, fans of contingent value got a big lift from a blue-ribbon panel of economists with no financial stake in the issue — a lift that assures the technique will be treated with respect by the courts.

Acting under the Oil Pollution Act of 1990, which requires the National Oceanic and Atmospheric Administration to write damage-assessment rules for oil spills, the agency invited six economists, including two Nobel Prize winners, to advise it on contingent value. Their January report lays out tough standards for credible surveys — standards virtually no survey to date would meet — and urges the Government to conduct benchmark studies of its own. The economists concluded, however, that "contingent-value studies can produce estimates reliable enough to be a starting point for a judicial process of damage assessment."

The regulators are not obliged to adopt the panel's recommendations when they issue rules. But it would be the bureaucratic path of least resistance. And if, as is widely expected, the agency does follow the recommendations, the Interior Department would probably adopt parallel standards for damage assessment on toxic waste and air pollution violations. Indeed, the failure of either agency to defer to the panel's expertise would open it to legal challenges from one side or the other.

Courts Are Reluctant

The impact of the new rules is anyone's guess. Opponents take heart from both the heavy burden of credibility imposed by the panel and the reluctance of Federal courts to carve out precedents. Where big money is involved, moreover, defendants will have every incentive to hire experts to punch holes in the evidence. "I believe that no contingent-value study will ever meet the courts' standards," said John Seddelmeyer, associate general counsel of Exxon USA.

But Mr. Seddelmeyer may be whis-

ting in the wind. "I see great potential for mischief here," conceded Mr. Portney of Resources for the Future, who was a member of the blue-ribbon panel and, in principle, supports the contingent-value approach.

Mr. DiBona of the petroleum institute is not shy in speculating about the potential consequences. While the chances of getting hit hard with a damage award for lost passive use may be low, he argues, the sums involved are so large that they are bound to affect commerce. At the least, the legal exposure would raise insurance premiums, he said, and the

risk might well render it impossible for some industries to obtain insurance.

That might lead Congress to rethink the very idea of linking damage awards to the pain felt by Americans when they learn a wilderness has been sullied or a species endangered. But then again, maybe not.

"I can think of no instance in which Congress has relaxed environmental regulation," said Robert Hahn, an economist at the American Enterprise Institute. "It's just not politically correct."

How the Interviews Were Conducted

To see what Americans would pay to avoid a repeat of the 1989 Exxon Valdez oil spill, the State of Alaska surveyed 1,043 people in the 50 states.

First, interviewers described the consequences of the Exxon spill and offered a description of a program for preventing future spills.

"... Although the cost would be high, the escort ship program makes it virtually certain there would be no damage to Prince William Sound's environment from another large oil spill during the 10 years it would take all the old tankers to be replaced by double-hulled tankers ..."

Then the interviewers explained who would pay.

"All the oil companies that take oil out of Alaska would pay a special one-time tax which would reduce their profits. Households like yours would also pay a special one-time charge ... in the first year and only the first year of the program."

Next they estimated the program cost. The dollar figure was randomly set at four different levels.

"At present, Government officials estimate the program will cost your household a total of (\$10, \$30, \$60, \$120) ... This money would only be used for the program to prevent damage from another large oil spill in Prince William Sound."

Those who said they would vote for the program were asked if they would pay a larger amount (\$30, \$60, \$120, \$250). Those who said they would not vote for the program were asked if they would pay a smaller amount (\$5, \$10, \$30, \$60).

The median response — the answer that represented the 50th percentile of all answers — was \$31. The average dollar figure was a considerably higher \$94. Interpreted as the answer to a popular referendum, the median represents the majority view that households would collectively be willing to pay about \$2.8 billion to prevent another spill. Interpreted as a kind of marketing survey, the average suggests that households would collectively pay \$8.6 billion to buy a spill-free environment for Prince William Sound.