California Report Sets Standard for Comparing Risks

A new report to the California Environmental Protection Agency (CalEPA) is being hailed by scientists of all political persuasions for its hard-nosed approach to one of the hottest environmental issues of the day—comparative risk. But industry groups in California are complaining that the study's careful analysis of threats to human health and the environment is undermined by a new category of risks based on such intangibles as "peace of mind."

The 600-page report* summarizes the current scientific thinking on dozens of environmental hazards, from asbestos to ozone, detailing the potential risks of each. What scientists like best is its careful explanation of the methodology, data sources, and assumptions behind the rankings. "The report should get high marks for identifying susceptible populations and noncancer effects," says toxicologist John Moore, a former high-ranking EPA official who is now director of the Washington, D.C.–based Institute for Evaluating Health Risks. "It's a very big step toward outlining how we should go about dealing with the most severe problems first," says Julie Roque, senior environmental policy analyst in the White House Office of Science and Technology Policy.

The 2-year, $360,000 study, prepared for CalEPA by more than 100 scientists, is part of a nationwide effort by the U.S. EPA to help regulatory agencies in each state identify their most pressing environmental risks (see map). The idea is to help cash-strapped states cope with a growing pile of federal environmental statutes by making it easier to compare the costs and benefits of proposed regulations to existing rules.

The study ranks risks in three separate categories: their effects on human health, on the health of ecosystems, and on social welfare. For example, organochlorine compounds and particulate air pollution rated as high risks to human health, and wetlands loss and the introduction of exotic species were judged high risks to ecosystems. Many experts are especially pleased with its consistent use of such criteria as toxicological information on carcinogenicity and noncancer effects, as well as patterns of exposure to risks throughout California. The human health panel "did the strongest work [by a comparative risk project] I've ever seen on noncancer health effects," says environmental policy analyst Kate Kramer, director of the Denver-based Western Center for Comparative Risk Analysis.

The section on human health has also won plaudits for ranking individual compounds, such as asbestos and radon, separately from groups of compounds, such as mixtures from automobile exhaust. Analyzing groups of compounds separately allows regulators to make better assessments of relative risk across media—air, land, and water—says biochemist Ken Jones, director of the Northeast Center for Comparative Risk at the University of Vermont. Rankings of individual compounds can then be used to help regulators make budgetary decisions.

In addition, the report is applauded for tackling the volatile issue of whether poor people or people in certain occupations are disproportionately affected by some environmental hazards. The report contains important findings in this regard, such as its identification of subsistence fishermen as being exposed to high levels of persistent organochlorines from the fish they catch and eat.

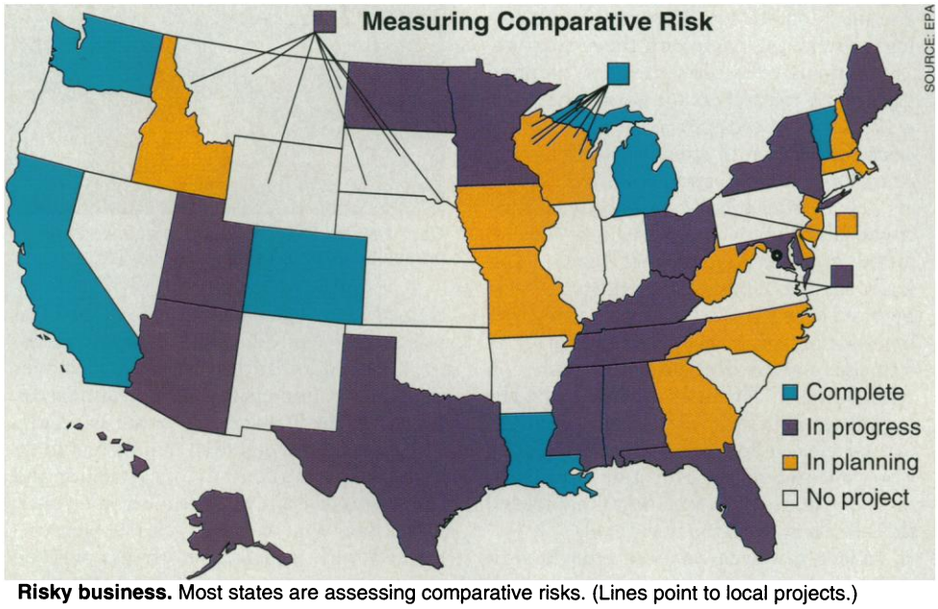
So far, so good. But the consensus breaks down over the report's creation of a social welfare category—based on criteria ranging from economic well-being to "peace of mind." For example, such risks as increasing atmospheric levels of greenhouse gases may pose modest health or ecological threats, according to the report. But they are deemed high-risk hazards to social welfare because of their potential for harm in such areas as "mental health, trust of governing institutions, access to reliable information, personal security, and personal relationships."

Industry representatives cringe at this terminology. The social welfare section "is vacant in regard to fact-based analyses," says Victor Weisser, president of the industry-supported California Council for Environmental and Economic Balance. "Social welfare clearly has a place, but it shouldn't be dealt with on the basis of feelings or emotions," he says. Roger McClellan, president of the Chemical Industry Institute of Toxicology, says regulatory agencies should spell out when they're making decisions based on the public's peace of mind rather than on risks to health or the environment.

The potential political fallout from this aspect of the report has apparently caused California Governor Pete Wilson to impose an official silence during his tough re-election fight against Democratic challenger Kathleen Brown. An aide to the governor said Wilson did not want to "create a campaign issue." Instead, he ordered CalEPA to withhold comment until after the close of the public comment period, 2 weeks after California voters go to the polls.

Although it is unclear whether California will benefit from the report's findings, many other states developing their own comparative risk projects are expected to use the approach California has taken in ranking health and environmental risks, says Kramer. "The report may be dead on the California scene right now," says University of California, Berkeley, policy expert William Pease, who co-chaired the report's section on human health risks, "but it's alive nationally."

–Richard Stone



Risky business. Most states are assessing comparative risks. (Lines point to local projects.)

*"Toward the 21st century: Planning for the protection of California's environment," California Comparative Risk Project, 1994.