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Comparative Risk Assessment and Congressional Regulatory Reform

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Comparative Risk Assessment and Congressional Regulatory Reform

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A FRAMEWORK FOR ENVIRONMENTAL PRIORITIES
Midwestern Perspectives

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Midwestern Perspectives

Why do some environmental bills capture the attention of legislators far more quickly than others? Why are some questions economically or environmentally far more important than others? Why are some research results used widely, while others become peripheral? The motivation to better understand these type of questions propelled us to embark on a three-year (1992–95) project funded by the Joyce Foundation of Chicago, Illinois. In the Fall of 1992, a small but highly effective group of individuals, including elected representatives of midwestern legislatures, decision makers of major federal and private environmental organizations agreed to serve on a Steering Committee for this project. The Committee met once each year, during the summer of 1993 and 1994, for two days on the campus of the University of Iowa in Iowa City, Iowa.

During the first year, we investigated the factors contributing to the setting of agendas and priorities within the context of environmental bills in the Midwest. The Steering Committee, selected invited guests, and the project staff reviewed and evaluated a myriad of mechanisms that influence the agenda setting process in the enactment of environmental bills in Midwestern legislatures. In 1993, the project team actively evaluated the utility of the four competing paradigms of comparative risk assessment (CRA), environmental justice, pollution prevention, and innovation in the priority-setting process.

In 1993, we observed major national coalitions forming around the issues of unfunded mandates, regulatory reform through risk assessment and cost-benefit analysis; and expanding private property rights through a re-definition of “takings.” Since the dramatic events of the 1994 elections, and the Republican “Contract with America,” several Federal bills on unfunded mandates, takings (private property rights), and regulatory reform are currently making (or have already made) their way through the U.S. Congress. In the last few months alone, regulatory reform as well as the topics of unfunded mandates and takings/property rights have been hotly contested in the nation’s capitol. In the context of this dynamic sea of political change, what is needed is the dissemination of timely, useful, and unbiased information to state-level elected officials and policy makers.

In the first two years we held conferences to explore the mechanisms by which environmental legislation gets formed, passed, or defeated in state legislatures in the Midwest. We explored the utility of the CRA paradigm and the competing or alternative paradigms of environmental justice, pollution prevention, and innovation in legislative settings. We also considered in detail the implications of the “Unfunded Mandates,” and the “Takings/Property Rights” issues on the Midwestern legislatures.

Armed with much useful information on the above topics, we held three workshops, one each in Michigan, Kansas, and Minnesota during the Spring/Summer of 1995. These workshops investigated how the issues of unfunded mandate relief, property rights/takings and risk regulations at the federal level will influence the agendas of state legislative committees on the environment. Over eighty individuals, including about thirty five Midwestern legislators, legislative staff, interest group leaders, and lobbyists from five states attended one of these workshops.

Based on the experiences over the last three years, including the 1995 workshops, we found that critical environmental problems have broad generality, are conflict-ridden, and require analysis in multi-dimensional information domains (such as social, political, legal, economic, public-opinion, and scientific spheres). Typical examples of such problems include the well known case of siting noxious facilities (the “not in my backyard syndrome,” or NIMBY), the regulatory provisions of the various federal acts (Clean Air, Clean Water, Safe Drinking Water, RCRA, and CERCLA) which have led to the current impasse of “no more unfunded mandates,” and debates over the various agenda or priority setting paradigms of CRA, environmental justice, pollution prevention, and innovation.

We concluded that timely dissemination of brief Research Note such as this would be of much value to state-level elected officials and others with strong interest in environmental protection and public policy.

About the Authors

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THE IOWA EXPERIENCE

We come from places wide and far
To find out what the factors are
That make a law succeed or fail,
The stones that lie along the trail
As we seek to break the long stagnation
With good environmental legislation
That has support of many factions
To guarantee successful actions
In a fight to save our whole landscape
From history's abuse and rape;
To clean our water, land, and air
So our offspring know we really care;
To leave a legacy that's prime,
And to know we acted just in time.
To share ideas we were hidden
To explore approaches value-ridden

And start upon a broad alliance
With a new context to air our science
Let's carry on this weekend's labors
And inject our legislative neighbors
'Til they, without a single pause,
Unite with us in common cause,
So that efforts here to make a start
Won't falter, fail, and fall apart
So that facts and feelings both come through
Yielding better laws for me and you
That yes, for ours and other nations,
Will last for seven generations,
And we'll know we've played a special role
When we know, at last, our earth is whole.

Llewellyn R. Williams, Sage of the Sagebrush

Note: Dr. Llew Williams, one of our Steering Committee members from the U.S. EPA graciously contributed the above poem at the end of the first annual meeting in 1993; and also the poem on the back cover of this note at the end of the second annual meeting in 1994.
Introduction

Throughout recorded history, human beings have been assessing the threat from various natural and man-made hazards on life and property. The advent of the industrial revolution, the development of large-scale technologies, and the production and distribution of thousands of chemicals have heightened the amount of attention drawn to such issues. Over the last few decades, the process of risk assessment has been considerably fine-tuned. The use of phrases like hazards assessment, cancer risk assessment, non-cancer risk assessment, health risk assessment, welfare risk assessment, and comparative risk assessment have become quite common.

In this research note, we provide a brief sketch of the process of risk assessment and its role in the setting of environmental priorities and an overview of the current debate in Congress that deals with regulatory reform through the use of risk and cost-benefit analysis.

Comparative Risk Assessment

The notions of hazard, mitigation, risk, and risk perception

In our lives, we are exposed to many different natural and man-made hazards. Lightning, floods, hurricanes, poisonous mushrooms, and aflatoxins are all nature’s hazards; sewage effluents, supertankers, cigarette smoke, and thousands of synthetic chemicals are man-made hazards.

We protect ourselves and the environment from these hazards through a variety of mitigation measures which enable us to navigate smoothly through the hazards presented by the world. We regularly take measures to protect ourselves from floods, earthquakes, hurricanes, lightening, and a myriad of man-made poisons and modern technologies. Sunglasses, helmets, seatbelts, suntan lotions, heating/cooling systems, lightning rods, air bags, and boil water orders are examples of common mitigation measures.

The amount of risk incurred from a hazard is a function of both the severity of the hazard and the strength of available mitigation measures. A specific hazard may be quite dangerous; but if our mitigation measures are robust, the resulting risk will be minimal. If few mitigation measures are in place, however, relatively small

Glossary of Terms

Hazard: In general, hazards are those elements in our natural and human-engineered environment that are harmful to human and environmental health. Drought, hurricanes, floods, and lightning are natural hazards; whereas, carcinogenic chemicals, plane travel, and nuclear tests are human-engineered hazards.

Mitigation: Measures taken to protect human and environmental health from hazards. Helmets, seatbelts, scrubbers, chlorinating water supplies are examples of mitigation measures.

Risk: The potential or probability of realization of the harmful consequences of a hazard. It is a measure of both the severity of the hazard as well as the strength of mitigation measures taken to protect against the hazard.

Risk assessment is a process of characterization of potential adverse health effects to humans or the ecosystem resulting from exposure to environmental hazards.

Risk communication is a process of exchanging information about risk. The risks which may be most dangerous are not always the risks of greatest concern in the minds of the general public. While risk communication can not change people’s minds; it can play an important role in bringing public and expert ideas of risk closer together, thus contributing to better policy.

Risk management is the process of weighing alternatives and selecting the most appropriate regulatory action. It integrates risk assessment with technological feasibility, economic information, statutory requirements and public opinion. Ideally, regulatory decisions will be a balance of social, economic and political concerns.

Cost-benefit analysis attempts to compare and contrast the positive and negative aspects of a specific action on society as a whole within a common economic framework. Generally, a number of alternatives are analyzed, resulting in the selection of the alternative with the largest benefit-cost ratio.

Cost-effectiveness analysis attempts to select the lowest cost alternative that achieves a predetermined level of service, effectiveness, or benefits. Conversely, the analysis can identify the alternative that leads to largest social benefits, effectiveness, or service for a fixed cost.

Comparative Risk Assessment: It is a procedure for ranking environmental problems by their seriousness (relative risk) for the purpose of assigning program priorities. Typically, a team of experts identify problems by type of risk: cancer, non-cancer, ecological, material damage, and so on. To arrive at a measure of relative risk, the experts then compare and rank the problems within each type based on factors such as severity of impact, the number of people exposed, the duration of exposure and the like.

Alternatives assessment: Analysis and assessment of various alternative economic development plans. Typical examples include front-end assessment of transportation, energy, and natural resources development alternatives as opposed to the assessment of end-of-pipe control technology options.

Environmental Regulatory Reform: A variety of activities initiated by the Congress and the White House to strengthen environmental laws and related regulations. The administration’s major reform effort -- Reinventing Government, the House bill H. R. 1022, and Dole’s Comprehensive Regulatory Reform Act S. 343 in the Senate are the three major items to watch.
hazards can create quite serious risk. Experts quantify risk as the expected annual mortality, or some related statistics originating from a "hazard." On the other hand, the public perceives risk in a broader fashion. Sandman describes the elements which exacerbate public perception of risk as "outrage factors."

The risks that kill you are not necessarily the risks that anger or frighten you.

Sandman, 1987

Some factors influencing public perception of risk include: Is the risk voluntarily borne or coerced? Do people have control over prevention and mitigation measures? Is the risk burden spread fairly? Is the government agency responsible for protecting the public considered trustworthy or dishonest; concerned or arrogant? Is the risk familiar or exotic? Has there been a major event recently regarding this risk?

The cultural and political aspects of risk

The word "risk" is a culturally constructed concept with significant political and value-forming influence in modern society. Douglas cautions that risk should be approached critically, with an awareness to its subjective character and context-driven meaning. The original meaning of the word risk came from the notion of chance or a bold initiative taken to achieve something; risk now has an additional meaning of technological burdens that lead to negative or unhealthful consequences. The shift in meaning parallels similar shifts in modern society, and reflects a new concern over accountability. According to Douglas, risk and how it is dealt with is a part of the process of culture itself.

Sapolsky writes that, for the most part, consumers use personal experience to guide them through economic and political decisions; but for many health and environmental matters, they must rely on intermediaries (scientists, government officials, and media) to guide behavior. Intermediary advice can lead to distortions. The result is that sometimes small risks receive massive attention and resources, while large risks go virtually unaddressed.

Democratic political systems depend on open availability of accurate information and knowledge of the issues and options. In recent decades, however, such information has become less and less accessible to the American public. As a result, the actions of governmental agencies and politicians have been influenced by pressure groups. Public perceptions of risk have been distorted and manipulated by the mass media. Both environmental interest and industry groups find advantage in exaggerating or minimizing potential risks to win public support for their causes.

An additional problem is that scientists are able to detect increasingly lower levels of potentially dangerous elements in common products. When reported in the mainstream press, such results can stoke public fears, but statements concerning the actual risk involved are based on contested assumptions about actual exposures and resultant effects of low-doses on human health. Some published extrapolations from high- to low-dose effects have been challenged by other scientists, who claim that great uncertainty exists about exposure thresholds. Without the "constraints of certain, objective knowledge, the regulation of risk becomes political."

Wildavsky comments that, in a political climate without widespread objective knowledge about risk, agencies are subject to politics that respond to public perceptions of risk, which are sometimes at odds with real dangers. Every change of political leadership means a change in priorities. Personal interests pass for public policy, and cultural biases and political orientation are found to be the best indicators of risk perception.

Risk assessment and environmental regulations

Risk assessment in four steps

First, hazards are identified to determine if available data supports a causal relationship between the hazard and injury to human or environmental health. The main question is “Are the results of a particular health hazard transferable to other populations?”

Second, the “dose-response” measure of the risk is quantified. Dose-response measures the relationship between exposure (dose) and response, as established through laboratory toxicological (animal) studies. There are many assumptions and significant extrapolations involved in dose-response.

Third, an analysis of exposure in exposed populations is carried out. Emissions, their concentrations, diffusion in the environment through different pathways (air, water, food, soil, and so on), and lifestyle characteristics are taken into account in this process.

Finally, the data and conclusions from the above three analyses are used to characterize the expected risk under real-world conditions in light of the reference dose. The reference dose is an estimated level of daily population exposure at which no likely injury could be observed over a lifetime. This final characterization includes a description of uncertainty, data gaps, and information that is needed but unavailable. All such matters are identified and presented as part of the risk characterization process.

EPA and Risk Assessment

The U.S. EPA integrates data and conclusions from risk assessments with public concerns, economic costs and benefits, statutory requirements, technical feasibility, and long-term reduction potential.

Since the 1960s and 70s, the focus of national environmental protection has shifted away from large scale
"Visible" environmental threats to the more complicated and often "invisible" threats of toxic chemicals today. Risk assessment and risk management are useful tools with which the EPA can confront these environmental threats. Modern risk assessment grew out of EPA's need for increased objectivity in developing regulations mandated by environmental statutes, and improved ways to communicate the scientific basis for decisions to the public.

Commoner states that while risk assessment can be a rational, scientific and somewhat of an objective process for making environmental decisions. However, in practice, he says it can be used as a manipulative tool to justify the preconceived decisions and investments of certain individuals and groups. Using a case study of trash disposal in Brooklyn, New York, he illustrates how the process was abused. Persons with a vested interest in a specific technology (e.g., incineration) used the provision of pseudo-scientific support for the use of this technology at the expense of other more environmentally sound and cost-effective technologies (e.g., recycling). Commoner believes that participation of an educated and well-informed public in the risk assessment process is the best way to restore common sense to environmental regulation.

Risk assessment is a useful method or approach for organizing information from many different sources. The outcomes of a risk assessment depend on the scope, the purpose, the choice of data collection method, the quality of data, and the process of data synthesis. Risk assessment is both science (objective) and policy (subjective) at once.

Risk management

It should be clear that there is a strong need for the public's input into risk assessment decision-making. The public brings complex values to the process, considering elements of risk that go beyond the scientific goal of reducing calculated risk. These include the physical characteristics of the risk, its source, distribution, and the manner in which it is imposed on the community. It is their constitutional right to be a part of the process, and the resulting assessment will be better informed by their input.

The decision to investigate certain questions necessarily means other questions are not investigated. Therefore, the decision has social and political as well as scientific qualities. Scientific objectivity lies not only in the question, but also in the procedure of research. The case is even stronger for research regarding environmental and public health issues because human behavior is the cause of the problems, and any solutions to these problems will require some type of adjustment to this behavior.

Risk Communication

The communication of risk to the public provides improved environmental protection by taking public "outrage factors" into account. Risk managers need to understand public reaction, and make changes in policy to help bring public and expert assessments of risk closer together.

I know of no safe depository
of the ultimate powers of society but the people themselves; if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion.

Thomas Jefferson

Risk assessment means different things to different people. It is therefore necessary to emphasize the importance of communication between scientists, media, industry, environmental groups, and the general public. Presentation of the information is also a consideration: an overabundance of information could lead to an inability to synthesize and use the information effectively.

To avoid "environmental gridlock" in a democratic system, effective methods of communication, education and public participation must be implemented. Risk assessment provides a framework for organizing what we do and do not know, which then must be conveyed to the public in such a way to allow people to participate in the decision-making process.

CRA according to EPA

The origins of comparative risk assessment

Comparative Risk Assessment (CRA) was posited as a way to establish priorities, allocate resources efficiently, and merge scientific knowledge with public values and perceptions.

Setting priorities during the formative years at EPA was not difficult, because the Congress, the EPA, the public and the experts all fundamentally agreed on the problems to be addressed. However, after the most visible forms of pollution were abated, and controls were established for the most pressing problems, it became obvious that many more forms of pollution existed which were less visible but no less hazardous to health.

The fragmentary nature of EPA's regulatory programs also became apparent. Laws dealing with environmental problems were not consistent even when dealing with the same pollutant. The efforts of different programs, built to accommodate different laws, were rarely coordinated, and the primary tools used to protect the environment were end-of-pipe controls. The EPA had developed into a reactive rather than proactive agency. Under Administrator William Reilly, leadership at EPA felt that the Agency needed to change from one focused on crisis management to one with an overall strategy to effectively deal with a myriad of national environmental problems. Priorities had to be set, and a process based on a comparative assessment of risk posed by various problems was proposed as a
tool to be used by government.

To help focus federal strategy, the EPA formed a task force to develop a ranking of relative risks associated with major environmental problems. In 1987, the EPA published its landmark study, *Unfinished Business: A Comparative Assessment of Environmental Problems*, in which it compared and ranked the relative risks of 31 environmental problems, giving rise to the concept of comparative risk. The study highlighted the discrepancy between public and expert perceptions of the greatest risks to human health and the environment, the disparity between the relative seriousness of these risks and the amount of resources allocated towards them, and the existing correlation between EPA’s current programmatic priorities and the public perception of risk. For example, some of the serious problems identified by experts included air pollutants, indoor air quality, and global climate change; whereas, many opinion polls point to serious public concern in the areas of waste disposal (Superfund sites), water pollution, spills and accidents. The importance of “Unfinished Business” did not lie in the rankings themselves, but in the heralding of comparative risk assessment as a promising method for setting environmental priorities.

Another step institutionalizing comparative risk assessment (CRA) as a tool for setting environmental priorities was the 1990 report *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*. EPA’s Science Advisory Board (SAB) was requested to review *Unfinished Business*, examine strategies for reducing major risks, and recommend improved methodologies for comparing risks in the future.

The report on *Reducing Risk* recommended that the EPA target its protection efforts based on the greatest opportunities for risk reduction, and use risk-based priorities in its strategic planning and budget processes. Together, these two reports laid the foundation for the use of CRA in environmental policy and planning. These efforts resulted in EPA engaging the public and Congress in a dialog on risk so that expended protection efforts reflect risk priorities. A special issue of the *EPA Journal* was devoted to discussing the history and the general processes governing CRA, and the pros and cons of its viability as a priority setting tool. In it, then-EPA administrator William Reilly argued that the EPA had been using a piece-meal approach to solving environmental problems, dictated by public fears and concerns. The pollutant-by-pollutant and medium-by-medium basis of management ignored the linkages between problems, their overall effect on human health and the ecosystem, and the questions of cost.

In the same issue of the journal, then U.S. Senator Durenberger stated that, while he favored the Science Advisory Board’s (SAB) endorsement of pollution prevention and market incentives, he questioned CRA methodology which presumes objectivity. He further argued that sufficient data to permit informed comparisons had yet to be collected. He suggested that we give credence to public opinion and values and consider intergenerational equity, and reject the notion that resources for environmental protection are limited.

**Practice of CRA**

Over the last four years, the CRA process has evolved. EPA promotes it as an interdisciplinary, cross-media, problem assessment and planning effort. It can be implemented at any level, federal, state, local, or watershed. It brings diverse stakeholders to the table to reach consensus on problems that pose significant risk to ecosystem and human health, and quality of life. It enables governmental units to set priorities.

To assist various units of government, the EPA has created two technical assistance centers, the Northeast Center for Comparative Risk (NCCR) and the Western Center for Comparative Risk (WCCR).

Governmental units wishing to develop a CRA project can receive technical assistance of three types, direct cash support (most have been in the range of $50,000 to $150,000), specific technical support through NCCR or WCCR, and EPA staff support.

To be eligible for funding, the project plan must include public and private stakeholders; public participation; analysis of ecosystem and human

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**Reducing Risk**

The report on *Reducing Risk* followed up on the earlier *Unfinished Business* report and recommended that EPA adopt the comparative risk assessment paradigm as a strategy for setting priorities in its environmental programs. The ten recommendations offered in the report state that EPA should:

1. target its environmental protection efforts on the basis of opportunities for the greatest risk reduction.
2. attach as much importance to reducing ecological risk as it does to reducing human health risk.
3. improve data and analytical methodologies in support of risk reduction.
4. reflect risk-based priorities in its strategic planning processes.
5. reflect risk-based priorities in its budget process.
6. make greater use of all the tools available to reduce risk.
7. emphasize pollution prevention as the preferred option for reducing risk.
8. increase efforts to integrate environmental considerations into broader aspects of public policy in as fundamental a manner as are economic concerns.
9. work to improve public understanding of environmental risks and train a professional workforce to help reduce them.
10. develop improved analytical methods to value natural resources and to account for long-term environmental effects in its economic analysis.
health, and quality of life risks; risk ranking and the development of management strategies.

So far, EPA has provided technical assistance to over 45 units of government. The status of such projects, as of April 1995, is shown in the figure on the next page. Several midwestern states, tribes in Wisconsin, and the cities of Columbus and Cleveland have projects in various stages of development. Michigan has completed its project and Iowa is in the planning stages.

We need to improve the translation of scientific knowledge into the vernacular of politics and public opinion, to make rational risk assessment a part of every citizen's common sense.

William Reilly, Former Administrator, U.S. EPA

The converse is also true: we need to improve the translation of public values -- such as a desire for public equity, freedom from involuntary risk, aesthetic quality, and a deep commitment to future generations -- into the vernacular of the scientists and regulators.

Richard Minard, Northeast Center for Comparative Risk

Competing paradigms

Realizing CRA’s momentum within EPA, in 1992, the Resources for the Future hosted a conference on Setting National Environmental Priorities. CRA and three alternative paradigms for setting environmental priorities, Pollution Prevention, Innovation/Market Incentives, and Environmental Justice were presented and discussed. The Proceedings were later expanded and published in the form of a book. Each of the 22 chapters provides an overview of a major issues concerning comparative risk assessment (including questions of procedure and implementation), pollution prevention, environmental justice, and technological innovation. Concluding chapters attempt to reach a synthesis among the competing views and paradigms presented.21

Commenting on the 1992 RFF conference, Alm9 argued that none of the three alternative paradigms (Pollution Prevention, Environmental Justice, and Market-Based Innovation) are inconsistent with the CRA approach, and in fact, CRA as a paradigm includes all of the alternatives under its umbrella.22

Finkel disagrees with Alm’s assessment of CRA as an all-inclusive paradigm, and Pollution Prevention, Environmental Justice, and Technological Innovation are not merely subsets of CRA. Using the analogy of medical diagnosis, Finkel argues that CRA is useful for “pinpointing the symptoms of environmental diseases,” but grossly inadequate to discern the causes. He concludes that CRA is important and necessary, but not at the exclusion or decreased consideration of the other alternative approaches.23

O’Brien10 proposes an “alternative assessment” paradigm which rejects the underlying assumptions of comparative risk assessment (i.e., 1. environmental problems are a given, 2. we can’t address all of the problems, and 3. we should therefore prioritize and choose amongst problems). Instead, she contends that environmental problems are avoidable, society is capable of addressing all of them, and

Environmental protection is not a privilege to be doled out according to a process of "environmental triage," but a right for all individuals. CRA institutionalizes a system of unequal protection across racial and class lines.

Robert Bullard, Professor
UC Riverside

Public opinion is broad enough to determine if changes are desirable, CRA is not.

Barry Commoner, Professor
CUNY at Flushing

Strict regulation, properly designed, can trigger technological innovation and yield more risk reduction at lower cost than can risk-based priority setting schemes.

Nicholas Ashford, Professor
MIT

of choosing the alternatives which involve the entire society. Therefore, “positive” and “possible” alternatives, with full public participation, should be considered for all environmental problems.24
Status of Comparative Risk Projects
(as of April 1995)

Seattle
Allegheny Co.
Elizabeth River
Charlottesville
Atlanta

Complete
In Planning
InProgress
Uncommitted

Regional and State Planning Division, U.S. EPA, 1995
Risk regulatory reform

Supreme Court Justice Breyer proposes an institutional solution for addressing the systemic problems plaguing the efficacy of the EPA's environmental programs in recent years, in a book entitled Breaking the Vicious Circle. Breyer includes in these problems 'the last 10 percent' syndrome, the distance between public opinion and expert perceptions of risk; and the inconsistencies within EPA programs and agencies. Citing the "vicious circle" of technical uncertainty, Breyer lists public perceptions and congressional actions and reactions as the primary cause of the currently fragmented and inefficient environmental policies and suggests the creation of a new centralized institution to break this trend.

This new federal institution should have sufficient resources and power to set environmental priorities. Composed of civil servants, the new institution would adopt the mission of building a coherent, risk-regulating system to set environmental priorities. It would have interagency jurisdiction, political insulation, a certain measure of prestige, and, most importantly, the authority to achieve and implement results. Uniformity and rationality could be brought to the decision making process, while maintaining open communication with the public and a flexible responsiveness to local issues and interests. In short, by doing a "difficult job well", the result would be to create a "politics of trust".

Congressional Regulatory Reform

This section was written based on the information available from the four 1994 monthly issues and the ten 1995 monthly issues of Inside EPA's Risk Policy Report, the seven Environment and Energy Weekly Bulletins published by the Congressional Green Sheets Inc., and the On-Line Service LEGI-SLATE for daily updates of the House and Senate bills.

Introduction

Since the last presidential election, a groundswell of support for regulatory reform has developed, perhaps the result of the independent candidacy of Ross Perot and gridlock in Congress. A dozen or more best sellers with titles such as Reinventing Government, From Red Tape to Results, Death of Common Sense, Breaking the Vicious Circle, Reinventing the Corporation, and finally the Contract with America have all pointed to the upcoming reform efforts in Congress. Everyone (the Congress, the President, and the Bureaucracy, and the people), it seems, is in support of reform. Questions concerning the kind of reform needed, the timing, the effect on environmental protection efforts, the cost,

After laboring in relative obscurity among technology and policy professionals over the past decade and a half, risk assessment has now reached prime-time status as a major element of a legislative reform agenda in the 104th Congress.

Terry F. Yosie, 1995

the rules and regulations, and whether the reform will lead to a legal nightmare have been debated in the halls of Congress since 1992.

The following is a thumbnail sketch of the status of the environmental reform bills and some of the major points of contention and debate as of September 1995.

Risk Bills in Congress

The House of Representatives

H. R. 9, Job Creation and Wage Enhancement Act, one of ten proposals in the Contract with America, introduced in the House on January 4, 1995, consists of many components, including the requirements of risk assessment and cost benefit analysis for new regulations.

Environmental decision-making in a democracy is not a math problem.

Cleland-Hamnett, 1993

A component of H. R. 9, was introduced in the House on February 23, 1995 as H. R. 1022 Risk Assessment and Cost-Benefit Act of 1995 and, after some debate, passed the House (286-141) on February 28, 1995. The House also passed H. R. 9 (277-141) on March 3, 1995. Some analysts have described the pooling of many aspects of reform (good and bad) within the same bill as a parliamentary strategy of the Republican leadership to make it difficult for President Clinton to veto the bill.

The Senate

On January 21, 1993, Sen. Moynihan introduced a bill in the Senate. S. 110 Environmental Risk Reduction Act putting into practice the major findings of the SAB's Reducing Risk report. He argued that choice is not between having or not having priorities, but between choosing to set them consciously or by default. The bill called for the implementation of CRA in setting environmental priorities by federal government agencies and did not get out of committee.

That 130 to 140 billion dollars a year may not be too much to spend on environmental protection, but it's entirely too much to spend foolishly.

Senator Moynihan, 1995

In January and February of 1995 (in the 104th Congress), several regulatory reform bills were introduced and referred to different committees of the Senate: S. 100, The Regulatory Accountability Act of 1995 by Sen. Glenn (D-OH); S. 123, Environmental Risk Evaluation Act of 1995
What are the major issues in the reform debate?

The scope of judicial review, the "super mandate" issue of the applicability of the new risk bills to all existing statutes that do not meet risk and cost benefit analysis requirements, and the "lookback" issue of re-examining existing regulations have all been major subjects of debate. For example, Senate bill S. 343 requires that major rules should undergo risk assessment and a test of cost benefit analysis.

The reform bills in the House and the Senate would replace the "arbitrary and capricious" standard of the Administrative Procedures Act (APA) with the new "substantial evidence" standard. This would make it easier for any "interested person" to petition for the "issuance, amendment, or repeal" of a rule. Some argue that this would increase the number of court challenges based on every procedural step in the bill.

In its current version, S. 343 states that a rule cannot be challenged in court solely on the basis of an agency's failure to comply with the risk assessment and cost benefit analysis requirements and that a rule's benefits justify its costs does not override existing laws.

The current language (decisional criteria) in the bill is such that an agency can still promulgate a regulation that does not meet the requirements of the proposed risk and cost benefit analysis. In such cases, the agency must seek the least cost option and provide Congress with an explanation as to why the stricter test was not met.

The decision criteria leading to the issuance of rules under many existing health, safety, and environmental statutes are not necessarily based on a cost benefit test. The super mandate provision of H. R. 1022 will not permit the issuance of a rule if benefits do not justify costs. Dole's S. 343 would require a cost benefit analysis but would not automatically override existing statutes. Senators Glenn (D-OH), Levin (D-MI) and other democrats want to change the current requirement under "super mandate" to force the selection of the least cost option when benefits are quantifiable. They would prefer flexibility, enabling the selection of slightly larger cost options which might have the potential to produce significantly higher benefits.

Key questions here include the extent of coverage in terms of the number of agencies that will be under the purview of the reform bills and the definition of major rules that must undergo risk analysis and the cost benefit test. The number of agencies included in the various bills range from nine to almost all federal agencies; the dollar amount of economic impact of the rules range from $25- $100 million. The economic threshold for major rules in the current version of S. 343 has been changed from $50 million to $100 million.

Who stands where on Congressional Regulatory Reform?

The Clinton Administration and the U.S. EPA

The administration claims that as written the reform bills will roll back more than two decades of environmental gains, serve special interests and not the public interest, and enable polluters to tie up the government in litigation. It will restrict EPA from taking on new problems and impose a huge $1.2 billion in compliance cost to meet the analytical requirements of the reform bill.

Industry groups

The Alliance for Reasonable Regulation (ARR) is a broad coalition of industry, business, commerce, manufacturing, and industrial health organizations brought together to promote unified regulatory reform strategy in Congress. The coalition is spearheaded by the National Associa-
tion of Manufacturers (NAM), and includes the Chemical Manufacturers Association (CMA), the US Chamber of Commerce, the American Industrial Health Council (AIHC), the American Petroleum Institute (API), and the Coalition for Uniform Risk Evaluation (CURE). ARR believes that the reform bill must provide for an effective petition process for the affected parties and that agencies themselves must be held accountable for complying with the legislation. It is strongly opposed to the recent Robb-Conrad proposals modifying the Senate bill S. 343.

Environmental interest groups

To influence legislative debate on risk reform, environmental interest groups have launched a major grassroots campaign and education. Some 30 national public interest (environment, health, labor, and citizen) organizations have jointly formed the Science and Environmental Health Network (SEHN) to do grassroots public education work dealing with science/risk and public policy. SEHN states that its objective is to develop a common strategy for real pollution prevention or reduction as opposed to risk-assessment driven risk reduction.

A coalition of more than 225 organizations under the banner of Citizens for Sensible Safeguards sees S. 343 as undermining public protections and federal safeguards by massively expanding federal agency workloads while cutting their budgets. The coalition has published two reports, one describing inaccurate anecdotes about regulatory excesses and the other describing special access by industry interests.

Risk reform at the state level

The risk reform bills in Congress are not directly intended to apply to state programs, but if a federal agency conducts an incremental evaluation of a state program, then one could expect a draw-down effect on the states. Following efforts in congress, several states are exploring risk reform bills. Mississippi was the first state to enact a comprehensive risk bill enabling the shifting of resources to high priority areas. Next New Jersey began to require cost benefit analysis. Florida just passed a law to create new risk-based priority council. This year, the states of Alaska, Colorado, Florida, Indiana, Missouri, and Ohio are considering risk reform bills.

Mirroring the efforts in Congress, a few Midwestern states also explored reform.

- In Indiana, both houses considered a bill restricting the state from passing regulations more stringent than federal standards. It would have required risk and cost benefit analysis for those that passed. The bill cleared neither chamber, even though it was a listed as a high priority item for the Chamber of Commerce and the Indiana Manufacturers Association.
- A senate committee in Missouri considered a bill that would have required its DNR to perform a variety of analyses including cost of implementation, risk assessment and comparative risk assessment. Another bill introduced in the House would have applied to all agency rules and would have required cost benefit analysis, although not risk assessment.
- A bill in the Ohio House would have triggered agency information gathering for environmental hearings and subsequent need for legislation. It would also have required an analysis of cost to local government and consultation with affected parties prior to the promulgation of rules.
Sources for further information

Columbus, Ohio: Richard Hicks, Columbus Health Department, 181 Washington Boulevard, Columbus, OH 43215-4096. (614)-645-6189.


Greater Cleveland, Ohio Area:
Norman Robbins, Department of Neuroscience, School of Medicine, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4975. (216)368-2194.


Michigan: John Shauver, Department of Natural Resources, Mason Building, P. O. Box 30028, Lansing, MI 48909. (517)335-4065.

Minnesota: Paul Schmiechen, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, MN 55155. (612)296-7795.

Missouri: David Bedan, Missouri Department of Natural Resources, P. O. Box 176, Jefferson City, MO 65102. (314)751-4533.

Ohio: Michelle Morrone, Ohio EPA, 1800 Watermark Drive, Columbus, OH 43266-0149. (614)-644-3711.

Western Tribes: Mike Frost, Southern Ute Tribe, P. O. Box 737, Ignacio, CO 81137. (303)563-0135.

Wisconsin: Tim Mulholland, Bureau of Environmental Analysis and Review, Wisconsin Department of Natural Resources, 101 S. Webster Street, Madison, WI 53707-7921. (608)266-0061.

Wisconsin Tribes: Dee Peace Ragsdale, Department of Ecology, P. O. Box 47600, Olympia, WA 98504-7600. (206)476-6986.

Northeast Center for Comparative Risk (NCCR): Ken Jones, Director. Vermont Law School, P. O. Box 96, Chelsea Street, South Royalton, VT 05068. (802)763-8303.

Western Center for Comparative Risk (WCCR): Kate Kramer, Director. P. O. Box 7576, Boulder, CO 80306. (303)494-6393.
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During 1992–94, several invited guests, experts, scholars, and specialists willingly came to Iowa City and shared much valuable information with the Steering Committee at our annual meetings. We thank the following individuals for either sharing their insights or being gracious hosts: Professor Lynton Caldwell, University of Indiana; Mr. Kevin Doyle, Director, National Programs, Environmental Careers Organization, Boston; Associate Dean John Fix, University of Iowa; Mr. John Griffin, Sokaugen-Chippewa tribal community representative, Wisconsin; Mr. John Konefes, Director, Iowa Waste Reduction Center, University of Northern Iowa; Ms. Kate Kramer, Director, Western Center for Comparative Risk, Boulder, Colorado; Mr. Larry Morandi, Senior Fellow, National Conference of State Legislatures; Mr. Tim Mulholland, Scientist, Comparative Risk Assessment Project, Wisconsin DNR; Former Provost Peter Nathan, University of Iowa; Dr. Mary O’Brien, University of Montana; Mr. Adam Rombel, Editor, ECOS Magazine, Council of State Governments; Ms. Judith Stockdale, Former Executive Director, Great Lakes Protection Fund, Chicago; and Mr. Craig Struve, Owner/Manager, C-S Agrow Services, Iowa.

With the assistance and insights of the Steering Committee and the invited guests we learned a lot about the process of priority setting in the first two years (1992–94). During the last year, especially in the last six months, we took the show on the road and conducted three workshops, one each in Michigan, Kansas, and Minnesota. Once again, we owe much to the four Steering Committee members Rep. Bill Bobier (MI), Rep. Laura McClure (KS), Sen. Chris Beutler (NE), and Sen. Steven Morse (MN) who were instrumental in hosting these workshops and turning them into a highly productive learning experience for the participants and us. In all over eighty individuals, about thirty-five of whom were elected officials, attended and actively participated in the workshops. We very much appreciated their attendance and active participation.

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On perspectives -- thought you would like to know

- On the average, an American spent about $4,000 per year (in 1992) on health care. Ninety percent of that money was spent in the last months of life.
- Less than one percent of the health care dollars went to preventive care, or less than $34 per person per year.
- Congress, in late July 1995, has been debating the EPA appropriations bill which will fix the U.S. EPA’s FY 96 budget at $4.89 billion, or less than $20 per person per year.
Change, Change on the Range

Iowa City, you sure look pretty with the sun of late Spring in your skies.
From dawn 'til dark, we're constructing an ark, as the waters of conflict arise.
So much to be done, such wars to be won, when the health of our world is at stake.
It takes more than compliance and credible science if the logjam of problems we'll break.

The meeting gets brisk as comparative risk is put down with a sense of derision;
As the scientist says, there are so many ways to arrive at a better decision.
With so many actors and so many factors and so little money to burn,
We're going berserk; will alternatives work as we figure out just where to turn?

Will the world out there trust us to advocate justice for the groups with so little standing,
Where the easy solution's been to put the pollution in their yard without understanding.
That someone must fight for their inalienable right to breathe free, to eat safe, to drink pure.
If they can't turn to you, then what else can they do, and who will their safety ensure?

Will the laws in the making protect from the taking the properties we've worked to own,
Or on the contrary, can some law arbitrary strip our holdings down to the bare bone?
As part of the scene, we'll go "Beyond the Green" to direct the environment movement.
Restoring the brownfields or all the surround fields to A- or B-level improvement.

It's never a breeze to collect impact fees when employers decide to just move,
And leaving the rest to just plain decongest does not always the environment improve.
To minimize harm, you just buy out a farm where expansion's at minimal cost;
 Beware of the ruse, you may have a "lose-lose" when at both ends you see what's been lost.

Can we keep our production while we get waste reduction with newer approaches we use;
If we balance our wealth with ecological health, we'll find we don't have to abuse.
When we dug out the mud of the 100-year's flood and assessed all the disaster's reasons,
Just who's to account as restoring costs mount, when we knew well the risks of the seasons?

With all that we've shared, let's be better prepared to move forward with good legislation.
That right from its birth clearly better the Earth with efficient and just regulation.

Llewellyn R. Williams, "The Sage of Sagebrush"

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A Midwestern Perspective

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