# Expertise and the Policy Cycle

by
Dr. Jack Barkenbus

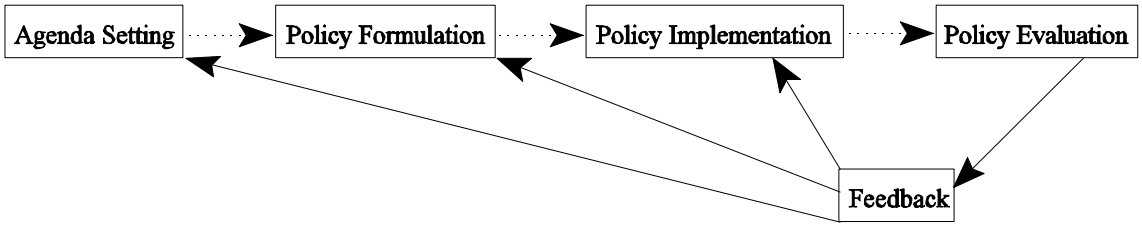
Energy, Environment, and Resources Center
The University of Tennessee
September 1998

Experts can, and often do, play an important role in environmental decision-making. An understanding of this role, however, must be based firmly in the political mileau in which decisions are made. Moreover, a review of the role of expertise in decision making is enhanced when it is viewed across the entire policy spectrum and not just at one particular point. The purpose of this write-up is to briefly elucidate the role of expertise (defined broadly as specialized knowledge and experience) in decision making across the policy cycle. As such it provides a "mapping" context or jumping-off point from which to launch further investigation of the decision-making process.

Political scientists devoted to public policy issues have, since the early 1970s, used a fairly common heuristic framework to provide conceptual grounding for public-policy analysis. This framework consists of discrete phases or stages associated with the policy process (Anderson, 1978). Some political scientists have identified as many as seven stages in the policy process, but the most conventional rendering cites only four. The stages are usually arranged sequentially, as depicted below, and include a feedback loop.

*THE POLICY CYCLE*

Decision-making research often focuses exclusively on the *policy formulation* stage. This is the




predecision phase that encompasses the steps in the decision-making process set forth by Tonn and Peretz (1998) as (1) identify alternatives, (2) gather and analyze alternatives, and (3) apply a decision tool. It also is the phase targeted by Dale and English (1998) in their study of decision-making tools. This focus is understandable in many respects. If the charge is to "improve decision making," one of the most obvious ways to do so is to provide decision makers with an understanding of specialized knowledge or expertise that can assist them in making wise choices among alternatives. Exclusive attention to this phase and this approach, however, is negligent in two respects: first, it is based on the unproven assumption that access to

greater expertise and tools is critical to improving the decision-making process, and, second, that the greatest gains in decision-making capabilities are to be found in this particular stage of the decision-making process.

Unfortunately, some researchers assume that environmental decision makers work in what political scientists term a "rational man" context. This is a context in which the decision maker dispassionately—and with unlimited time, resources, and access to information—weighs alternative policies to find the technical solution that best maximizes public welfare. It is now well-established, however, that this context seldom exists in reality. Decision makers usually operate within a tight time frame with inadequate resources and information. They are buffeted by special-interest pleading, bureaucratic imperatives, and political forces whose vision extends no further than the next election cycle (Dye, 1984). In such an atmosphere, greater technical expertise can play a role, but a significantly constrained one, at best. By failing to account for this, the researcher runs the risk of becoming irrelevant in the eyes of those whom he/she is trying to assist: namely, the user community that receives its output. Rosenbaum (1998) relates this message precisely, stating, "Rational analysis, carried on in an ignorance of political reality, may well end up so divorced from social reality as to be of little use to anyone."

Decision makers are acutely aware of the constraints they are under and are keenly cognizant of the fact that technical solutions to problems in the policy-formulation process are only a part of problem solving. By recognizing this fact, and broadening the scope of the research efforts, future researchers can assist in building the necessary bridge between the culture of the academic community and the very different culture of the decision maker.

The following sections provide a preliminary discussion of the role of expertise in each stage of the policy cycle, recognizing the political world in which it exists. It will be shown that expertise has a role to play in each stage, but plays a greater role in some of them than others. Examples will be given, when possible, at both the federal and state levels.

## Agenda Setting

There is an infinite number of environmental issues that could reach the agenda of decision makers. Political scientists have been quite active in researching the process by which issues gain ascendancy as they compete for the limited attention of policy makers (Kingdom, 1984; Dearing and Rogers, 1996; Downs, 1972). The process is not random, but neither is it completely predictable.

Neophytes in environmental policy may believe that science and expertise play a driving role in agenda setting. By all accounts, however, they do not. Dearing and Rogers (1996) state bluntly that "scientific research results do not play an important role in the agenda-setting process." Rather, they claim that issues reaching the attention of decision makers do so on the basis of the social construction of reality, whereby perceptions count at least as much as reality. The media are seen as key elements in this construction, reaching and influencing a public that is concerned about environmental quality but relatively ignorant of specific environmental issues and their causes. Not all media are equal. A headline in *The New York Times*, for example, will have more influence than one in lesser-known newspapers. Likewise, a segment on *60 Minutes* will have an immediacy and impact greater than that of any print messages. The nature of events covered by the media are also important drivers. A catastrophe on the order of the *Exxon Valdez* breakup is bound to gain more public and decision-maker attention than the incremental seepage of oil from backyard automotive oil changes—even though the collective environmental insult is greater from the latter than the former. Certain individuals, e.g., the president or a governor, are also able to get key issues on the agenda by virtue of their public office.

While recognizing that experts are seldom the *drivers* for issues reaching the public agenda, one should not ignore the extent to which expertise is drawn upon to legitimize issue attention. That *New York Times* article getting the attention of policymakers, for example, will nearly always have a scientific underpinning based on expert-reporter discussions. The same can be said for initiatives that come out of the executive branch at both federal and state levels. Hence the fact that scientific expertise is seldom a driver for agenda setting in the realm of environmental policy, should not diminish the key role that it plays in the process.

Attempts to make science a more powerful driver in this stage of the policy cycle have been evident in recent years. Comparative risk studies at both the federal and state levels have attempted to identify issues that have gained little attention (and resources) despite evidence of relatively high risks or environmental insults (one of the foremost issues being indoor radon, for example). The basic thinking behind many of

these studies has been that once we carefully identify risks according to their respective magnitudes, attention and resources will shift from low-risk concerns to high-risk concerns.

Despite the popularity of these studies, there is little evidence to show a restructuring of environmental priorities. Speaking specifically about comparative risk studies, Davies and Mazurek (1998) have stated that they are "an excellent tool for identifying problems and defining strategies, but most exercises to date have not yet resulted in significant changes in the way lawmakers and administrators actually target resources at environmental problems." Bureaucracies and interest groups have formed around long-standing environmental issues and have resisted attempts to alter environmental priorities. The short-term results from comparative risk examinations, therefore, have been quite incremental, and the movement remains at the margins of our environmental-protection system.

The Environmental Protection Agency (EPA) is beginning to support anticipatory efforts to identify serious environmental problems. The agency's research program on endocrine disruption is a prime example of investing in science to determine the seriousness of an issue. It also has recently asked for research proposals (*Futures: Detecting the Early Signals*) that would assist policymakers in identifying emerging environmental problems before they arrive in full force. How much of this anticipatory approach is taking place at substate levels is unknown, but one suspects it is not considerable.

**Policy Formulation**

Regardless of how an issue reaches the public agenda, expertise can become a part of its solution. It is important, however, that attention to systematic techniques or methodologies ("tools") not be expected to lead directly to these solutions. The perceived relevance of specific analytical tools changes over time. During the 1960s, for example, the operative decision-aiding tools were seen to be such things as systems analysis, operations research, and cost-benefit analysis. While interest in these techniques has not dissipated, a new set of tools is gaining ascendancy, including geographical information systems, small-group elicitation or contingency valuation, and survey research. Hence, while some form of decision-aiding tools appears to be part of the permanent landscape, the emphasis upon particular tools will wax and wane.

Expertise, however, is much broader than just knowledge of decision-aiding tools. Political leaders for

generations, indeed millennia, have sought the blend of intelligence, wisdom, and systematic reasoning that certain individuals possess. When these qualities are combined with knowledge of a particular substantive area and its history, the opportunities for enlightened decision making are considerable. Expertise as embodied in a particular decision-making tool, therefore, is not a prerequisite for providing valuable and specialized insight.

Just as expertise should not be defined too narrowly, so too, should the benefits derived from utilizing expertise not be construed too narrowly. We sometimes think of expertise as only directly assisting in the choice between prescribed policy alternatives. However, this "instrumental" value, in the long run, may take a backseat to the importance of the "enlightenment" value of expertise (Oh, 1991). This refers to the gradual, but perceptible, altering of how decision makers perceive issues and their solutions. In the absence of expertise, decision makers in the United States are likely to formulate policy options on the basis of ties to special and powerful interests. Indeed, their entire perspective on the issue may be shaped by these interests. This, however, results in a constrained set of policy options. Experts with no ties to special interests can provide a broader perspective on policy issues, often bringing with them a wealth of experience and a set of policy options unconstrained by narrow interests. The enlightenment value of expertise, therefore, increases policy space and thereby enhances the potential of formulating win-win policies.

While expertise serves both instrumental and enlightenment functions in the policy-formulation phase, it is important to reiterate its limitations. A host of other factors collectively influence the decision maker in making choices that may work at cross-purposes to the advice of experts. A decision maker's constituents, funders (if he or she is an elected official), organizational imperatives, and ideological mind-set all arguably play a more important role in decision making than does expertise. This is no reason for despair; it is simply meant as a reminder of the limits of expertise. Perhaps more disturbing than the realization that expertise is used too little is the recognition that it is often used for political purposes. Science and expertise can be used to bolster a decision arrived at for other reasons. This policy rationalization often occurs because science and expertise lend an aura of legitimacy to policy formulations. An important distinction is whether one uses expertise to find solutions or, instead, uses it as a post-hoc rationalization of a preselected solution. Examples of both are abundant, and experts need to be aware of the context in which they are operating.

Despite the limits of expertise and its potential abuse, the perceived need for it in legitimate policy-formulation deliberations is unlikely to diminish over time. Weiss (1992) in her examination of think tanks claims a robust future for such organizations based on what she sees as gaps in the American political structure: i.e., (1) the fragmentation of the governmental system which creates a vacuum, and (2) the fact that few bodies aggregate interests. She states: "Coordinative mechanisms are needed to overcome fragmentation, to aggregate interests, to cope with complexity, and to take longer and broader perspectives on issues. It is in this context that internal and external policy-analysis organizations have flourished. They are filling a gap that few other mechanisms serve, and they are doing it with a philosophy of 'rationality,' 'logic,' 'evidence,' and 'expertise,' that is especially appealing to the American mind."

**Policy Implementation**

The policy-implementation phase has always taken a back seat to the policy-formulation phase of the policy cycle. This is understandable because the public perceives the major policy battle as being fought over defining the policy itself. Scholars know better. They know that policies themselves are not self-executing and that the elaboration and setting forth of policy mark just the beginning, not the end, of a full policy cycle. The perils that face those actually having to implement policy are substantial. Ingram and Mann (1980) maintain that implementation is so difficult to achieve that we should actually be surprised when there is any positive accomplishment arising from the policy itself.

Technical expertise is not what immediately comes to mind when one thinks about implementation. Administrative agencies are seen as the front-line organizations for implementation because they are charged with the responsibility of carrying out the dictates of policy. However, expertise, to some extent, is located within administrative/regulatory bodies, and these organizations also rely heavily on outside experts as well. Anderson (1972) has stated, "Administrative agencies constitute a governmental habitat in which expertise finds a wealth of opportunity to exert itself and influence policy....Technical considerations and professional advice play an important part in most administrative decision making."

Experts play a key role in providing specificity to vaguely worded legislative mandates. We all are aware of policies that call for "safe" levels of human-environment interaction or "clean" environments for workers and citizens. Experts are frequently called on to provide science-based determinations of these desirable

qualities. For example, the recently-passed Food Quality Protection Act and the Safe Drinking Water Act call for the best available, peer-reviewed science to establish protective food and drinking standards. We know that such expertise, in isolation, cannot provide total answers to the questions of "how safe is safe enough" or "how clean is clean enough," but they are indispensable in reaching such determinations. The more quantitative these determinations are, the easier it is to set forth implementation plans with transparency and predictability.

Experts can be brought in to render determinations on an agency-wide basis, a programmatic basis, or a project-by-project basis. The Science Advisory Board (SAB) of the EPA is an example of a science-based body that evaluates implementation standards across an entire agency. At the state level, we frequently find advisory bodies associated with particular media, such as air, water, and waste. And project-by-project examples are too numerous to mention. Clearly, policies are not self-implementing. Indeed, expertise has an important role to play in addition to other forces, such as courts, political pressure, and interest groups. Expertise is utilized in this phase not only for standard setting but also for technical-assistance purposes. Laws and policies are frequently made at levels far above the level at which they will be implemented. For that reason, technical assistance is often needed to assist local communities in determining how to optimally enact policy measures. The consistency and insight of this assistance can be critical to the accomplishment of policy goals.

**Policy Evaluation**

If policy implementation is a *neglected* part of the policy cycle, policy evaluation is most often a *forgotten* element. It is hard to explain, on a purely rational basis, why this is so. One can easily and intuitively grasp the importance of evaluation in answering the simple and basic questions "How has the policy worked?" and "How can we improve policy implementation?" Answering these questions would seem essential to providing policymakers with necessary feedback to incorporate into future decision making. Yet by virtually all accounts, a systematic and thorough policy evaluation is the exception rather than the rule.

The environmental arena is no exception to the general rule. Davies and Mazurek (1998) state that full evaluations of environmental policies are all too rare. Portney, in his forward to that volume, states that

there is "much more attention to creating new laws and programs than to evaluating the performance of existing ones." Put another way, "takeoffs" are seen to be more exciting than "landings" (Rosenbaum, 1998). However, when we place this phase in the political context of the policy cycle, the reason why evaluation doesn't garner support becomes apparent: It could prove embarrassing to those who were responsible for formulating and implementating the policy. Once again, we must pull back from the assumption that decision makers function in a "rational," non-political, setting. Instead, decision makers function in a political mileau where success is critical for re-election. This frequently translates into the perceived need to repress uncomfortable facts derived from impartial evaluation or the need to conduct evaluation in a context certain to show positive results. This tendency, along with a predilection for maintaining the status quo, also explain why evaluations, no matter how carefully conducted, are often ignored, or shunted aside, by decision makers.

The fact that agencies seldom budget for thorough and far-reaching evaluations of projects and/or programs does not mean evaluation is absent. Some midcourse adjusting based on field experience is always taking place. In addition, the media, think tanks, and interest groups all conduct their own evaluations, some more thorough and impartial than others. Much of this represents anecdotal, as opposed to systematic, evaluation. Some may not distinguish between such competing bases for assessment as a project's impact, its efficiency, or its contribution to process improvement. Evaluation, however, is recognized as a professional activity; witness the existence of such organizations as the American Evaluation Association.

Evaluation is getting renewed attention at both the federal and substate levels through increasing interest in performance-based monitoring. Environmental indicators (i.e., measures of real environmental outcomes as opposed to process-based outputs) are being looked at carefully as a means of assessing policy impact. Continued devotion to this approach could lead to valuable monitoring consistency and also signal a heightened priority for programmatic evaluation and accountability. The difficulties associated with an approach based on environmental indicators, however, should not be underestimated. The issue of data quality and accessibility is formidable, and the ability to distinguish causality among a host of influencing factors remains daunting.

**Conclusions**

It should now be apparent that expertise has a role to play across all stages in the policy cycle. The importance of its role in each stage, however, will be circumscribed by politics. Most analysts despair of the limited role of expertise in decision making, asserting that more "rationality" would prevail in an atmosphere where analysis is heightened and politics diminished. Others, however, (Jenkins-Smith, 1990) warn that more analysis and less overt politics would produce a technocratic society inimical to the democratic process.

It was also pointed out that expertise should not be construed too narrowly. Facility in a decision-making tool is important but constitutes only a small part of what expertise brings to decision making. I would argue, in fact, that the transmittance of *experience*, rather than specialized knowledge, is the critical, neglected dimension of decision making—particularly as it pertains to subnational decision making. The states are frequently championed as "laboratories for democracy," and, indeed, they have the potential to fulfill that role. Laboratories, in a nonproprietary, scientific research setting, however, are obliged to disclose and disseminate research results. States are under no similar obligation, and learning from experience and experimentation seems to occur fitfully across the United States, if at all. A case can be made that a more serious, systematic effort to disseminate experience would be in order. States address national problems at varying paces, with few leaders and many followers. A setting that brings leaders and followers together, for mutually beneficial discussions, would appear to offer significant merit. Information technology can contribute to the success of such a setting but cannot replace it. Face-to-face meetings and discussions are critical to producing real learning and trust.

In short, all stages of the policy cycle constitute a rich environment for the transmittance of both specialized knowledge and experience. Future decision making could be enhanced in all stages through a committed effort to encourage and foster this transmittance.

## *REFERENCES*

Anderson, James E. (1972). *Public Policy-Making*. New York: Praeger Publishing.

Anderson, James E., et. al. (1978). *Public Policy and Politics in America*. North Scituate, MA: Duxbury

Press.

Dale, Virginia H. and Mary R. English, editors (1998). *Tools to Aid Environmental Decision-Making*. New York: Springer-Verlag.

Davies, J. Clarence and Jan Mazurek (1998). *Pollution Control in the United States: Evaluating the System*. Washington, D.C.: Resources for the Future.

Dearing, James W. and Everett M. Rogers (1996). *Agenda-Setting*. Thousand Oaks, CA: Sage Publications.

Downs, Anthony (1972). "Up and Down with Ecology--the `issue-attention cycle.'" *Public Interest*. Number 28, Summer.

Dye, Thomas R. (1984). *Understanding Public Policy*. Englewood Cliffs, NJ: Prentice Hall.

Ingram, Helen M. and Dean E. Mann (1980). *Why Policies Succeed or Fail*. Beverly Hills, CA: Sage Publications.

Jenkins-Smith, Hank (1990). *Democratic Politics and Policy Analysis*. Pacific Grove, CA: Brooks/Cole Publishing.

Kingdom, John W. (1984). *Agendas, Alternatives, and Public Policies*. Boston, MA: Little, Brown and Company.

Oh, Cheol H. (1996). *Linking Social Science Information to Policy Making*. Greenwich, CT: Jai Press.

Rosenbaum, Walter A. (1998). "Why Institutions Matter in Program Evaluation: The Case of EPA's Pollution Prevention Program." *Environmental Program Evaluation: A Primer*. Gerrit J. Knaap and Tschangho John Kim, editors. Urbana, Ill: University of Illinois Press.

Tonn, Bruce E. and Jean Peretz (1998). "Institutional Issues and Subnational Environmental Decision Making. Informal Working Paper.

Weiss, Carol H. (1992). *Organizations for Policy Analysis: Helping Government Think.* Newberry Park, CA: Sage Publications.