MANAGING THE ENVIRONMENTAL CRISIS

INCORPORATING COMPETING VALUES IN NATURAL RESOURCE ADMINISTRATION

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The environmental administrative process involves the ways and degrees that policy is both generated and implemented at various stages and levels. It is a continuous process that involves many changes and value interpretations. Lynton K. Caldwell observes, "If administration may be defined as 'the art of getting things done,' then its scope and content will necessarily be as flexible as the methods available to the administrator, the objectives [values] he seeks, and the milieu in which he operates."[1] Much of the actual operating policy and its effects in environmental affairs depends upon the administrative process as it takes form through agencies and personnel. In this process, environmental values and considerations often may not be incorporated into actual operating policy and administrative operations, despite legislative and other policy mandates.

Agency Aspects

The consideration of environmental values in management decisions is often resisted by governmental agencies. Agencies are social and political institutions with their own sets of values and vested interests. Bureaucratic ideology, moreover, is concerned with survival and expansion of an organization. Consequently, the degree of administrative acceptance of or resistance to environmental values depends upon bureaucratic ideology or the collective value system of the agency. A comprehensive environmental approach is seldom attained in the administrative process because of pressures from diverse clientele groups as well as an agency's own security and expansion interests. As a bureaucratic institution, an agency is concerned with its own welfare first. Other interests are secondary considerations.

Environmental legislation requiring consideration of environmental values in agency deliberations necessarily falls into the latter category.

In the administrative process of an organization, according to Talcott Parsons, "Goals are those services or products that an organization sets out to produce. An effective organization is an organization whose outputs coincide with those stated goals."[2] However, many organizations do not follow stated goals. In order to survive, organizations develop pseudo goals. These pseudo goals take precedence over the stated goals and become a normal part of the organization's processes. Dependence on these substitutes is further complicated by other values demanding a place in the primary goal structure.[3] In the case of a governmental organization, political and social values may become more important considerations than primary goals, while means and procedures may become more significant than ends. For example, members of the Senate Armed Services Committee believe that too much emphasis is placed on "technical, managerial, and bureaucratic skills," in the Department of Defense to the detriment of "defense mission objectives" and "leadership skills in wartime."[4]

The goal selection process has various complexities. Goals or values are seldom specified and change over time. Some of the complexities involve identification and analysis of who defines the goals, by what processes, and how priorities are determined. Complex problems such as those pertaining to environmental quality are often presented to an organization in value terms relative to that organization's unspecified goals. This ambiguity creates a vacuum that permits the organization, consciously or unconsciously, to substitute secondary goals more oriented toward its immediate interests than toward the interests of society or the environment.

The preoccupation of agencies with secondary objectives or pseudo goals through goal displacement can result in a lack of responsiveness toward environmental considerations. A budget can become an end rather than a means for achieving real organizational goals, and it can serve to severely limit expenditures for environmental programs. For example, the Reagan administration used the budgetary process to severely restrict the effectiveness of the EPA in its implementation of environmental regulations that affect business.[5]

Similarly, a resource management plan can become a dogma for economic purposes rather than a flexible guide for meeting changing needs and addressing environmental concerns. When James Watt became the secretary of the interior he established a management-by-objectives (MBO) system. One of his major objectives was the promotion of energy development activities on public lands. Since the value of coal to be extracted

from public lands is far more readily determined than the value of wildlife habitat or scenic vistas on undisturbed lands, the latter were given limited consideration.

According to Douglas Price, "dissatisfaction must build up before there is a serious search for alternative programs, and patterns of communication lead to considerable decentralization of effective—as distinguished from nominal—decisionmaking."[6] A governmental organization may have its own sense of rationality and morality that can differ sharply from an outsider's views. Resistance to environmental value considerations, therefore, can be a natural product of the organizational process. Sufficient dissatisfaction will cause the organization to search for alternatives and to change its policies. In the environmental administrative process much dissatisfaction is produced through crisis situations and through information presented in the communications media, expression of public sentiment, and political awareness inside and outside organizational confines of such situations.

Decisionmaking and Values

In considering decisionmaking in agencies it is appropriate to recognize the value basis that underlies the various issues and choices. Decisionmaking processes ordinarily include debates and conflict when goals are formulated in relation to problems to be solved and when alternative ways of achieving these objectives are laid out for decisions.[7] Choices are often not made directly between values but between options that differ to the extent that they embody particular values (or neglect them), or in the emphasis that some values possess in relation to others. Many executives are strongly attached and devoted to their beliefs or values.[8] These emotional convictions in turn shape the pattern of decisions or organizational strategies for their organizations.

Values are important throughout the decisionmaking process. The way problems are shaped, defined, and perceived—including the urgency and importance of various problems—is basically a function of values. The recognition that something should be done about a problem is a value assertion. The values of individuals who implement the decisions are important. This is so because they can have a powerful effect on the shape of the ultimate policy after the normative tasks of setting objectives and ranking options have been completed at higher levels.[9] In this sense it is difficult to separate the various roles of generalist and specialist personnel relative to their impacts and influences on decisionmaking processes.

The environmental administrative process, therefore, needs to deal with the range and complexity of values as the underlying basis of decisionmaking.[10] Basically, values are individual or collective conceptions about what is important or desirable with emotional, judgmental, and symbolic components. Values are formed by groups of attitudes (a state of mind or feeling) that represent a behavioral predisposition toward a given environmental object or factor. Attitudes are produced by groups of beliefs that collectively cluster around a given environmental object or factor. Values, however, produce behavior in contrast to attitudes that represent a behavioral predisposition. In the final analysis every decision involves some form of value judgment with some values being sacrificed or reduced for the sake of others. For the purposes of this text, values encompass goals, beliefs, attitudes, and traditions that have significant influence on human interactions and the exercise of power. This definition also encompasses value systems of individuals and organizations.

Values operate in the following framework:

1. Values: including identification and analysis of involved values and their conflicts as well as their related alternatives and options with attention to consequences and projections of values.
2. Human interaction: relating and correlating the above to individuals, groups, and organizations that are directly or indirectly involved with the values and interests associated with the problems or issues on a formal and informal basis.
3. Power or authority: relating the above to formal and informal authority and/or power in terms of influence and/or spheres of influence as based on values and human interaction.
4. Decision or policy: analysis and evaluation of the authoritative allocation of values for the final stage or determination with recognition that much depends on how the selected values will affect other values associated with the implementation of the decision or policy.

Within this framework, decisionmaking determines a governmental policy that will shape an environmental or developmental action, nonaction, or degrees of any of these. Emphasis is given to competing and often conflicting values that operate through formal and informal human interactions in the struggle for power and authority, that is, the authoritative allocation of values. In a problem or issue the values involved may represent a variety of interests with positive or negative results for the environmental public interest. Serious environmental problems have re-

sulted from decisions that failed to consider and incorporate environmental and societal values properly.

The decisionmaking process must take into account the situational, incremental, and often tentative aspects regarding values. Further considerations involve time constraints, uncertainties, and set organizational response patterns; all three place severe limits on value analysis and content. Usually decisionmaking in environmental affairs is an ongoing, dynamic process and few decisions are of a final nature. The process often includes successive decisions based on new and interrelated problems or consequences over time. In this process values become clouded and unclear, and the optimum values and alternatives may be excluded or neglected in actual decisionmaking considerations.

The overriding requirement for decisionmaking in environmental affairs is the exercise of value judgments. Such judgments may be biased both internally and externally, whether clearly or indistinctly, and each individual will express his or her value orientation. Budget and time constraints as well as group priorities will also affect value judgments. For example, in order to be reelected a politician may seek to accomplish short-term goals that are at odds with the longer-term goals of environmental scientists. The public, often driven by sensational press coverage, may demand immediate redress of environmental problems. These biases manifest themselves in ambiguity or confusion.

Ambiguity and confusion of values characterize the latter part of the twentieth century. Determination and application of values to environmental problems are further complicated by the fact that values are constantly changing. Social goals are in a constant state of change. Thus, scientific and technological efforts to meet social goals are often ill timed.[11] Such efforts may no longer be relevant to the social goals identified at any given time. Furthermore, by their very nature values are difficult to describe and analyze relative to the way power is distributed and decisionmaking takes place in society. Although a great many individuals and groups may wish to see their environmental agendas enacted, only a few will successfully compete for the limited power of decisionmaking.

Values are an essential part of decisionmaking because they strongly influence the objectives that individuals pursue and the means they select for achieving these objectives. It would appear obvious that in most "real life" situations some values will have to be sacrificed for the sake of others. Equally obvious is that no one can assume a value-free role in environmental problem solving. In the decisionmaking setting old values may be changed or strengthened while new ones are learned. There will be constant organi-

zational pressure to support some values while rejecting others. Decisionmaking occurs against a background of conflicting, but intermixed, personal, and organizational pressures.[12]

Much of decisionmaking involves uncertainties and conflicts that interfere with group agreement on values and alternatives. This is particularly true with regard to the numerous values and complexities related to the environment. Total agreement by all the decisionmakers on a problem is rare; decisionmakers tend to use an incremental approach that allows for the incorporation of different values and views in a problem. Due to the uncertainties and time constraints associated with obtaining all the needed facts, incrementalism allows for inputs of different views or values on a problem by a specific group of involved decisionmakers. The incremental approach involves:

1. Searching for an alternative that satisfies each of the decisionmakers, although no one believes it is the ideal solution;
2. accepting the first proposal to which no one strongly objects;
3. avoiding pressing the search for basic values so far as to threaten cohesion and alliances.[13]

Incrementalism assumes that personnel can embrace the same proposal for different reasons so that exposing the ultimate goals or values is likely to get in the way of agreeing on what to do. Further incremental decisionmaking is directed toward marginal changes and the status quo. Thus it generally ignores long-term values while focusing on immediate problem solving on a short-term, practical, and piecemeal basis. The latter often excludes important environmental values and considerations while being attuned to economic and quantitative factors.

It seems clear that incrementalism in decisionmaking tends to deemphasize underlying values and distracts group members and leaders from considering them. Compromise on lowest-common-denominator solutions may neglect or disregard the value clarification and change needed to incorporate important environmental values and considerations into decisionmaking. If the assumptions and views of personnel on issues are not clearly identified and analyzed along value lines, then the decisionmaking processes through incrementalism can only deal with values on an indirect and partial basis. Personnel need to be more aware of the value nature of their views and assumptions, and to consider a broader range of environmental perspectives in order to improve comprehensive decisionmaking. When value intentions or assumptions are incorporated into proposed or actual alternatives, value change and growth may occur,

particularly in getting at the long-term consequences of an action. For example, the environmental and societal impacts and values associated with some alternatives may be inconsistent or negative.

Herbert Simon long ago pointed out that decisions were shaped and channeled long before they were officially made.[14] When decisions or recommendations reach the higher levels of agencies and departments the problem has been defined, the alternative solutions (and their value aspects) have been narrowed, and factual data have been gathered to support the recommendations. Important values, including those pertaining to the environment and society, may have been excluded from consideration already. Higher-level administrators cannot easily reclaim values and alternatives discarded earlier in the decisionmaking process, nor can they ask the right questions at the proper time in view of the specialized nature of the problem.[15]

Higher-level administrators usually have a vast and complex range of conflicting decisions and policies to make in their policymaking roles. These include conflict resolutions between various competing values and interests on a much larger scale than those of a given agency or of a specific unit within an agency. Therefore, it is paramount that important values be incorporated into agency and unit programs at the initial phases of the decisionmaking process.

A series of incremental decisions incorporating selected and limited values of personnel at various levels eventually accumulates into major policy changes. Throughout the decisionmaking process, personnel need to seek out and articulate a wide range of values that are important and relevant to the issues and problems under analysis. Robert Behn and James Vaupel argue that far greater emphasis should be given to thinking about the problem before analysis begins.[16] It is in this thinking stage that values should be clearly identified and, then, incorporated as the analytical process proceeds. Throughout the various operational stages of decisionmaking—such as problem definition, identification of alternatives, analysis of alternatives, and selection of acceptable courses of action—this value orientation should be incorporated.[17] This, in turn, requires more attention to values by higher-level personnel who are engaged in decisionmaking. Decisions in the environmental public interest are more likely to occur as a result of such a process.

Decentralization

Power to make decisions is widely dispersed throughout environmental and natural resource agencies. Because decisions affecting the environment

must be made at all levels of administration, decentralization of power must occur. Henry Mintzberg says, "Control over the making of choices (for decentralization)—as opposed to control over the whole decision process—does not necessarily constitute centralization."[18] *Decentralization* in decisionmaking consists of subordinates communicating to superiors inferences they draw from a body of evidence. The decision is then based on the subordinate's analysis. Uncertainty associated with an answer or recommendation is absorbed by the subordinate while the superior appears to make the decision. This process is like a book review in which the reviewer draws inferences and then communicates his conclusions to the reader who does not read the book.[19]

Decentralization implies that decisions are made in the field rather than in centrally located offices. Decentralization also implies greater responsiveness to and better perception of environmental concerns with close proximity of decisionmaking to the problems. But such intimacy also results in greater opportunity for local political and economic interests to influence and manipulate decisions toward nonenvironmental values and away from the environmental public interest.

A carefully orchestrated decisionmaking process that stipulates consideration of important values at appropriate times can minimize this potentiality. Herbert Kaufman aptly describes such a process in his study of the forest ranger. In noting that events and conditions in the field are anticipated and described in terms of courses of action, Kaufman observes, "the field officer then need determine only into what category a particular circumstance falls. Once this determination is made, he or she then simply follows the series of steps available to that category. Within each category, therefore, the decisions are pre-formed."[20] In describing the U.S. Forest Service Administrative Manual (with its similarities to other agency manuals), Kaufman further states: "The provisions describe what is to be done, who is to do it, how (and how well) it should be performed, when (or in what sequence) each step should be taken, where the action should take place, and even explain the 'why' of the policies—the reasons for their adoption, the objectives they are expected to attain."[21] Thus, many apparent ranger-level or decentralized decisions are in fact made for the rangers by centralized sources of the agency through established procedures. However, as Knott and Miller note, "No organization can program or predefine in the rules *all* the individual behaviors that are necessary for organizational success."[22] Agency personnel who simply follow a set of written rules may fail miserably in certain situations.

Stipulations of the National Environmental Policy Act of 1969 (NEPA)

require agencies to review and change various policies and procedures that conflict with standards and requirements of the act. Yet it is recognized that procedures, manuals, and informal ways of doing things are slow to change, particularly at the field level. Change, as well as decentralized decisionmaking, is further complicated by ineffective communication among levels of organizations. Dysfunctional activities and elaborate defenses reduce the probability that accurate information will flow through an organization.

Because of lack of trust and a desire not to make waves, important aspects of information and truth fail to be communicated among upper, middle, and lower levels of an organizational hierarchy.[23] Indeed, it can be argued that one purpose for creating various organizational levels is to prevent communication from taking place. The end result of this may be superficial treatment of environmental problems in decentralized decisions; the whole truth will not be told because of possible negative connotations. Consequently, much of central headquarters–field communications emphasize the conservative, technical, and superficial on a positive basis without covering real problems and issues.[24] Ben Heirs and Gordon Pehrson observe that "In some organizations, it is a simple rule of survival that one should only present proposals or views of the future that support or embellish 'safe' ideas already well-accepted in the decisionmaking process."[25]

The field person's individual mental picture is definitely important in the decentralization process because his or her values will naturally be reflected in the decisions made. With professional and organizational socialization that indoctrinates them to be responsive and sympathetic to local economic interests, personnel in the field may often incorporate local community values into their official actions. The location of administrative offices in small towns or villages places a field person in continuous professional and personal contact with individuals and organizations strongly committed to economic uses of natural resources and to development.

In contrast, field personnel tend to have more transitory contacts with recreationists and environmentalists concerned with noneconomic uses. Frequent rotations in job assignments are often necessary to reduce the influence of local political and economic interests. In the case of forestry (as well as other resource professions) local interests still may have a definite influence on the field person even at a considerable distance from the resources over which he or she has responsibility. A given individual, on the other hand, may have a value bias toward economic considerations, regardless of location.

The Environmental Public Interest

The administrative process both legally and ethically must serve the environmental public interest of a region, nation, or the planet as a whole. Administrative personnel are constantly requested to make decisions that favor economic over environmental values and considerations. This is especially the case with regard to public lands in the United States that are located primarily in the west and away from urban centers. On a professional and social basis, much of the daily contact of agency personnel is with individuals and organizations in small communities who are concerned with economic and commercial use of public lands and natural resources. Many resource agencies, moreover, have policies and procedures that require responsiveness and special attention to local economic interests. Role perceptions, outside pressures, organizational structures, perceived costs, personality characteristics, identification with certain outside reference groups, and other influences on personnel and agencies all affect and shape their values and decisions.[26]

An understanding of what the "environment" entails, like the symbolic concept of the public interest, is subject to various interpretations based on the values and perceptions of the individual or organization. Conflicts naturally occur when differing values and perceptions of the environment collide in the decisionmaking process. Although the concept of "public interest" has been used for some time, its environmental dimensions imply unique considerations that include ecological complexities, future generations of all life-forms, and intangibles under a holistic or integrated view of environment and society.

In the context of environmental administration, agencies and personnel usually claim that their decisions are in the public interest. However, this may or may not involve the above-mentioned unique environmental considerations. The public interest is often associated with assumed public benefits or needs when private interests may often be the real beneficiaries of a decision. Like any other concept, public interest is subject to individual and group opinions. Supposedly public opinion is reflected in the public interest in the process of governmental decisions. But this must occur through subjective value interpretations and judgments of agency decisionmakers operating under broad legal frameworks and discretion. A comprehensive public opinion is seldom fully expressed or understood as a determining force within any time period.[27] Further, consensus on public opinion may simply mean that the majority are not visibly speaking out at a given time on a given, often obscure, issue.

Often much of the administrative process is devoted to determining the public interest in a specific environmental decision. Richard W. Behan, in his article "The Myth of the Omnipotent Forester," stresses the tendency of professional foresters to assume that they know what is best for the land and that they can tell the public how lands should be managed. It may be noted that foresters are hardly unique in this regard. Their arrogance is shared by architects, planners, and other professionals accustomed to making land use recommendations and decisions. About the forester, Behan adds, "It is when the professional forester arbitrarily determines those ends, or even clumsily tries to, that he most seriously violates our classless society and democratic politics." Behan also believes that environmental pressure groups are properly most hostile and challenging when foresters involve themselves and their agencies in problems by attempting to determine the social ends of natural resources. He says that "It is when we invoke this rationale by judging, in its terms, 'goodness' and 'badness,' that pressure groups properly challenge our leadership. 'Goodness' and 'badness' in our society are collective value judgments, and land expertise is no better a qualification than many others for making them."[28]

Administrators play an important part in the process of determining the social ends of an abstract public interest. With an awareness of this fact, pressure groups attempt to influence administrative policy and decisions through the bargaining and compromise of brokerage politics in the highly political process of resolving resource use conflicts. Walter Rosenbaum notes that "governmental officials operate on the premise that major organized groups affected by a public policy should have an important voice in shaping and administering it."[29]

At various stages and levels of policy- and decisionmaking, many agencies have advisory committees and consultants from the private sector to assist them on complex environmental problems. Experts or specialists of this nature may be well qualified in the resource or environmental field under study. However, they are not necessarily qualified to determine what constitutes the public interest. But it is reasonable that they should develop and make recommendations for the public interest in an environmental problem or plan.

A valid consideration in the selection of expertise from the private sector might be the individual's demonstrated competence in making recommendations in the environmental public interest as well as in the specific problem area. In this regard the use of nontechnical experts and individuals as advisers on the relationships of society to a resource or

environmental problem is worth exploring. Individuals with vision, sensitivity, and broad knowledge, coupled with familiarity with environmental considerations, could reflect the spirit of the public interest by making contributions to the value bases for decisionmaking.

Many agencies use advisory committees made up of representatives of various groups that have special or clientele interests in their programs. Because of such relationships, the recommendations of advisory committees often cannot truly be equated with or viewed as the public interest. Even within these committees power struggles often occur, reflecting the values and biases of groups represented and the dominant interests of the more powerful groups. Thus, distorted views of the environmental public interest and disproportionate degrees of influence may often be demonstrated by advisory committees.[30] Little weight consequently can be given to the study and articulation of the public interest in environmental affairs and problems when representatives are pressing for the values and interests of their own groups. Furthermore, whole segments of the population may be excluded from inclusion on advisory committees. When the Reagan administration took over the reins of government the newly appointed EPA administrator, Anne Gorsuch, dismissed the existing members of the EPA's Science Advisory Board and replaced them with scientists more favorable to the administration's policies.

Public Participation

Because of various laws and changes in governmental and public attitudes, public participation now plays a more vital and visible role in the decisionmaking processes of environmental administration. It adds unique and new dimensions, especially in value considerations. Public participation in environmental assessments, planning, and decisionmaking has become an important factor for agencies and personnel at various levels to consider when making judgments and determinations. The solicitation and proper utilization of public participation inputs are therefore integral parts of the administrative process. In fact it is often only through public participation that certain types of information, evaluation, and public support can be obtained for environmental problem solving and decisionmaking. Public participation would facilitate consideration of such public values as lifestyles, quality issues, and other complex areas of the interface between society and environment.

The statutory basis for public participation in the United States is the Administrative Procedure Act of 1946 (APA). By the 1970s citizen

intervention in administrative proceedings of federal agencies was common. Under the APA agency decisions are subject to judicial review and citizens are given the right to participate in the formulation of federal rules and regulations affecting their lives, to the extent that these activities do not interfere in the performance of an individual agency's daily business. Essentially, this means that citizens have the right to present evidence and testimony that is to be considered in formal rule making.

Public participation is generally defined as that part of the decisionmaking process which provides opportunity and encouragement for the public to express its view. It assures that proper attention will be given to public concerns and preferences when decisions are made. Such participation includes involvement or consultation in planning, decisionmaking, and management activities dealing with environmental affairs. The public actively shares in the decisions that government makes in environmental affairs by having individual and group values taken into account. Effective public participation requires the availability of adequate nontechnical information, public encouragement, and opportunities to use that information.

Public participation inputs include suggestions, information, questions, views, and critiques expressed by members of the general public in efforts to influence decisionmaking in environmental affairs. The inputs may be made through both formal and informal participatory processes and may be solicited or unsolicited. Such processes usually involve a search for the public interest. The public interest is often subject to value interpretations and justifications through public participation and the administrative process. Peter Navarro warns that special interests and ideologues are capturing the policy process in the guise of serving the public interest. He says that "conceptually it [the process] allows for the possibility that private interest motives can indeed determine 'public policy.' "[31] Nevertheless, it is the responsibility of agency personnel to determine the overall interest of the general public in their decisions and to assure adequate public participation in the decisionmaking process.

EPA guidance suggests that public participation should:

1. promote the public's understanding and involvement in planning and implementing programs and proposed actions with emphasis on the nontechnical aspects.
2. keep the public informed about significant issues, problems, and changes in programs or proposed subjects, including associated values and alternatives.

3. make sure that government and personnel understand public concerns and values and that they are responsive to them, including public identification of issues and alternatives.
4. demonstrate that the agency, formally and informally, consults with interested or affected segments of the public and takes public viewpoints and values into consideration when decisions are made.
5. foster public involvement and activities that focus on identifying problems, laying out and exploring all of the alternatives to resolving the problems, and setting forth a preferred alternative.
6. foster a spirit of mutual trust, support, and openness between government, personnel, and the public through a variety of informal and formal contacts for public participation.[32]

Five basic functions are needed to ensure effective public participation—identification, outreach, dialogue, assimilation, and feedback. With respect to *identification,* it is important and necessary to identify groups or members of the public who may be interested in or affected by a forthcoming action. This can be done by developing mailing lists, requesting additional names from those already included, using questionnaires or surveys to discover levels of awareness, and establishing informal contacts by other means. Besides a general list, a specific contact list can also be developed for a particular program or project.

The public can contribute effectively only when they have accurate and timely information. Through *outreach* efforts an agency can provide such information on pertinent issues and related decisions. Information should be presented in a general, nontechnical manner for ease of understanding. Information that is too technical will usually discourage public participation. The agency must ensure that appropriate information is made available to potentially concerned citizens through the news media or other public service announcements and personal communications. The content should include background information, a timetable of proposed actions, summaries of lengthy documents and technical material where relevant, a delineation of issues, and specific encouragement to stimulate active participation of interested parties. Wherever possible social, economic, and environmental consequences of proposed actions should be stated clearly in the outreach information.

Dialogue should be carried on between personnel responsible for the forthcoming action or decision and the interested and affected members of the public. This includes an exchange of views and open exploration of issues, alternative courses of action, potential consequences, and value

considerations. Dialogue may occur through meetings, workshops, hearings, or personal interaction and may include the establishment of special groups such as advisory committees and task forces.

The *assimilation* of public viewpoints and preferences into final conclusions consists of putting together the results of the "outreach" and the "dialogue" phases. In its decisions and actions an agency must demonstrate that it has understood and fully considered public concerns. Assimilation involves two elements: (1) documentation in which the agency briefly and clearly presents the public's view; (2) a responsiveness summary in which the agency identifies and describes the types of public participation activities undertaken. Participants from the public should be identified. Summaries should highlight important comments obtained through the participation process and the agency's responses. Evaluations of public participation should contain both quantitative and qualitative aspects and should be directed to the basic issues involved.

An agency should provide *feedback* information to participants and interested parties concerning the outcome of any public involvement. Feedback may be in the form of personal letters or phone calls if the number of participants is small enough. When numerous participants take part an agency may mail a response summary to those on the list or may publish it. The feedback should include a statement of the action that was taken and the effect of public comment on that action.

A value emphasis throughout the public participation process can provide an overall basis and central theme for soliciting and incorporating public inputs into decisionmaking. This approach includes the relationships of values to alternatives and issues of planning and management for an agency. Problems often occur when there is failure to define or relate issues to significant public interests or concerns relative to values. The general orientation of the greater majority of the public is toward values that form the basis for their nontechnical concerns and interests. In this sense the general public can act effectively to educate decisionmakers about environmental values and concerns. Decisionmakers in turn can influence public opinion in environmental affairs. Further, a major concern in the public participation process is that all parties be aware of the alternatives or choices and that these choices be clarified through an emphasis on values.[33]

Value orientations in public participation also provide the advantage of early identification of public inputs and the recognition that values underlie complex issues and problems. William Whalen, former director of the U.S. National Park Service, indicates:

> It is essential that we identify and surface, at the earliest stage of public review, the difficult problems and thorny issues that have the greatest potential for causing public concern and reaction . . . by allowing the public the fullest and earliest possible involvement in developing alternative solutions we can build open lines of communication and trust between us and the many segments of concerned citizenry.[34]

Whalen's remarks suggest that solicitation of public input can be used not only to identify the environmental public interest, but also to pinpoint potential areas of controversy that may then be addressed and defused prior to becoming political problems for agencies. The establishment of "lines of communication and trust" can also have the effect of protecting agency priorities, rather than identifying and acting upon the basis of the public interest.

Agencies often carry out extensive public relations programs in order to build public support and gain political influence. These programs describe and justify the policies, missions, and activities of the agencies and make the agencies look good.[35] Complications arise, however, when an agency, through such programs, dictates social ends to the public and implements them through public relations techniques. Such programs can then be used as tools for promoting agency ideology and the vested interests of specific clientele. An administrator can, for example, articulate a value decision and then sell it to the public.

A biased premise with selected supporting data does little to enlighten public opinion and encourage meaningful participation. In fact, it may be repugnant to those who like to consider the alternatives rather than be "sold" a position. Many agencies neglect their responsibilities to inform people objectively about the facts and alternative solutions to environmental problems and offer instead a closed system. For instance, much of the public relations literature from governmental agencies is confined to platitudes and niceties that are presented in an almost insulting, simplistic manner. The environmental and conservation movements attempt to counter such efforts with realistic coverage of complex ecological interdependencies ranging from local matters to global concerns. As a result, a better informed citizenry has developed. A better informed public can more effectively influence policy decisions through expressions of values and opinions. Obviously, environmental administrators must be sensitive and responsive to such a trend.

Barry Commoner points out that the duty of scientists and administra-

tors in environmental affairs is to furnish information that will enable their fellow human beings to use judgment in the human use of science and technology. Without this, Commoner states, "We will have deprived humanity of the right to sit in judgment of its own fate."[36]

Public participation in the administrative process may contribute in important ways by: (1) forcing consideration of all different interests for making well balanced and comprehensive decisions; (2) exercising healthy pressures on agencies to be fair and not to take sides; (3) encouraging agency decisions that are more acceptable to the public because the public was involved; (4) protecting agency personnel from undue pressures by special-interest groups; (5) urging decisions in the public interest; and (6) guaranteeing more adequate consideration of health and environmental values and factors.[37] Public participation permits a wide variety of values to be articulated and analyzed, including people's perceptions and responses to possible changes in the status quo in terms of life-styles and the environment.

The influence of public perceptions in administrative processes is illustrated by the following example. A national meeting of U.S. Forest Service supervisors was held in Snowbird, Utah, in February 1985. The meeting was convened because of an increase in the number of legal appeals filed by the public against the majority of national forest use plans. Forest supervisors informed the chief of the U.S. Forest Service that the public was very unhappy about the overemphasis given to logging and other exploitative uses in national forest plans. After this meeting, agency officials were directed to give greater emphasis to public interest considerations in their plans. Even if little changed, at least U.S. Forest Service planning was made to appear more like what the public expected it to be.[38]

The degree of public involvement depends upon both the general attitudes of the government and the interests of the public. The central issue is the degree of trust and confidence that the public has in the management agency and observes that the participation process tends to increase that trust and build public confidence in the agency. In commenting on the role of public participation in national park management, Harold Eidsvik refers to a comment by Edwin Winge: "public involvement does offer long-range benefits, the most pragmatic of which is that it results in better decisions. Park Service managers have discovered through experience that when they are willing to modify their professional judgments by considering ideas and opinions (values) of concerned citizens, the final decision that results is not only more acceptable to the public, it also is more satisfying to the Service."[39]

However, many citizens do not share this viewpoint. They doubt whether public participation does indeed affect the decisionmaking process. Derrick Sewell and Susan Phillips evaluated a number of public participation programs and found that:

> While most agency representatives would claim that increased citizen involvement has led to increased inputs by the public into the decisionmaking process, citizens and citizen groups remain skeptical that this has in fact occurred. Even when increased input is acknowledged, such individuals or groups are suspicious that inputs of other actors (such as bureaucrats, politicians, or developers) are given much more weight in the final decisionmaking. In most instances the public is given no indication of *whether* its views were considered, and even if they were, *how* such views influenced the final outcome.[40]

Consequently, public decisionmakers must provide feedback to citizens who do participate in the policy formulation process to demonstrate to them that their views do matter.

Analysis of the impact of citizen participation on Forest Service decisions concerning RARE II (Roadless Area Review and Evaluation), provides additional insight on the effect of citizen input into agency decisionmaking. Paul Mohai attempted to verify which of two perspectives most accurately describes the role of citizen participation.[41] One belief is that decisionmaking in a natural resource agency like the Forest Service is strongly molded by its professional ideology. As a result of their professional training, according to Ben W. Twight, agency personnel tend to operate in a closed organizational structure somewhat insulated from public concerns.[42] Consequently, they are likely to make administrative decisions based on their training, regardless of the political consequences on the Forest Service in the form of citizen protests. In contrast, Paul Culhane, while acknowledging the role of professionalism in natural resource agencies, believes that the Forest Service and Bureau of Land Management (BLM) are responsive to public input.[43] He argues that citizen participation requirements in post-1970s environmental legislation and the activism of environmental groups ensure agency responsiveness to citizen concerns. Mohai concludes that:

> One could take the position that the RARE II decisions did not represent a true compromise or that the Forest Service did not respond to all its publics equitably. Such judgments are difficult to prove or disprove and depend very much on one's own value system. What is

important to recognize is that the Forest Service is apparently influenced by public input, whether it is equitable or not. The agency is also influenced by its professional ideology, whether that is rational or not or whether that serves the public interest.[44]

Environmental Impact Statements

Under the provisions of the NEPA, agencies are required to conduct environmental impact assessments (EIAs) for all proposed actions and programs that may significantly affect the environment. The purpose of these assessments is to minimize potential negative impacts and irreversible commitments of resources. If no significant impact is determined, an agency is required by federal regulations to issue a Finding of No Significant Impact (FONSI). If the agency determines that a significant impact is likely to occur, an (EIS) must be written. The EIS provides information on ecological inventories, potential impacts, program or project alternatives, and a recommendation as to the preferred alternative. Once drafted, the EIS is subjected to interagency review by all federal agencies that may have expertise pursuant to any aspect of the EIS. Finally, the EPA is required to review and comment on all EISs. Provisions also call for public participation throughout the above process.[45] Lynton Caldwell states: "The purpose of the procedure—environmental impact analysis—was to force federal officials to consider the possible consequences of decisions having major implications for the quality of the human environment."[46]

Among other requirements for federal agencies concerning EISs and related activities NEPA stipulates that they shall:

> (Sec. 102 [B]) identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making along with economic and technical considerations; (C) include in every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—
>
> (i) the environmental impact of the proposed action,
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
> (iii) alternatives to the proposed action,
> (iv) the relationship between local short-term uses of man's environment

and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[47]

These "action forcing" provisions of the NEPA prompt federal agencies to incorporate environmental values and components into their policy and planning operations. NEPA is regarded as a form of statutory intervention into the regular administrative procedures of federal agencies. "But the National Environmental Policy Act leaves the missions and structures of the federal agencies unchanged. There is no power directly authorized by the Act to prevent or modify any environment-affecting action by any agency of government. Court orders restraining federal projects have been based on agency failure to conform fully to the procedural requirements of the Act."[48] Courts (and most other governmental institutions) will generally not intervene in agency judgments and decisions, regardless of their value positions and nature of their bias. A review of NEPA-related court decisions indicates that the Supreme Court has only upheld decisions that support the procedural aspects of NEPA and not substantive considerations.[49]

Nevertheless, preparation of environmental impact statements does bring facts and scientific perspectives into the administrative process. Where significant environmental impacts are likely to occur, proposed public actions are subject to serious environmental review. Furthermore, requirements of the NEPA led to modest but real restructuring of administrative procedures in agencies.[50] Analysis of environmental effects and relationships had to be incorporated into agency planning and decisionmaking. Interdisciplinary approaches had to be incorporated into agency planning in order that complex environmental issues could be addressed. NEPA made practical the utilization of the theoretical unity of science itself. The act forced administrative changes in resource-oriented agencies and science provided the tools for making those changes meaningful. "Science . . . provided the substantive element in redirecting national policy for the environment through procedural reform. The critical procedure—the environmental impact statement—became the vector, carrying integrated interdisciplinary sciences into the shaping of public policy."[51]

An environmental impact statement (EIS) is a document prepared on the possible negative and positive effects and influences of a proposed project or development that would significantly impact the environment and society. It provides information to decisionmakers and the public on

the suggested undertaking and lists alternatives to the proposed action, including taking no action. A federal EIS is usually based on an environmental assessment (EIA), which is a preliminary assessment that determines the need for the more thorough and formal EIS. Through a systematic and interdisciplinary approach, the interaction of physical, natural, social, and economic factors is assessed. Probable effects and consequences of the proposed action on these systems are identified. It supplies information of this nature for decisionmaking and the EIS. Like the EIS, an EIA basically consists of asking and answering appropriate questions.

An EIS supplies an early warning and information system to the agency preparing it as well as to other agencies and the public. Many different public and private constituencies are made aware of proposed actions that might have significant environmental impacts. This is particularly important when many proposals are of an irreversible nature and would permanently foreclose other options and environmental values. Thus, environmental impacts should be a prime consideration in the earliest stage of project planning.

Although numerous questions can be raised about the effectiveness of EISs in altering federal agency actions, they are now a routine and integral part of agency operations for planning and decisionmaking. Recent agency attitudes point toward the preparation of analytical summary EISs contrasting sharply with past EISs. At the outset of the implementation of NEPA requirements agencies prepared voluminous EISs that often precluded adequate review. Agencies preparing those long and detailed EIS's feared having to redo and expand their environmental assessments.

The nature and extent of "environmental consideration" depends on the extent of administrative discretion that an agency is given, the quality of its personnel, and its level of public support. Many environmental abuses and problems could be prevented or greatly reduced with greater emphasis on environmental values by agencies. Often adequate consideration is hampered by insufficient and uncertain knowledge. The absence of such information complicates the prediction of complex ecological and other consequences of proposed developments and programs. Decisions are further complicated by differences in scientific opinions supplied by various experts—the "right" opinion often being the one that reflects the hierarchical power, dominant ideology, and vested interests of an agency. Even with the requirements of EISs for proposed actions, the strong influence of the agency and its vested interests (including clientele) is felt, despite interagency and public review. An agency need only *consider* environmental aspects in its

determinations and discretion, despite the severity of the environmental problems and negative consequences that are projected to occur. Once the procedural requirements have been met, pressure groups have extreme difficulty in challenging agency decisions even in the courts.

Due to his role in the development of the EIS requirements in the NEPA, Lynton Caldwell is repeatedly asked to comment on NEPA and assess its role in the federal decisionmaking process. He observes that:

> There are at least three ways in which NEPA cuts across the grain of traditional management theory and practice. First, it contradicts long standing command-control assumptions. Second, it qualifies and complicates narrowly defined mission assumptions and commitments. Third, it holds the risk of embarrassing career advancement in the public service. Thus it follows that the beliefs of public officials regarding their roles, responsibilities, and opportunities in public management influence their attitudes toward the implementation of NEPA.[52]

The environmental impact statement process has had profound effects on federal agency policies. Serge Taylor identifies two modes of influence that EISs have had on decisionmaking in the administrative process: "The first is internal—the analysis provided by the EIS analysts to the decisionmaker. The second is external—the increased political resources (in the form of information, authority, and legal resources) provided environmental interest groups and environmental agencies to challenge a development agency's technical premises, present competing alternatives, and have their preferences count more in the final balancing."[53] The EIS process, in some form or another, has been adopted by many state and local governments and by other national and international agencies. Thus this section is relevant to more than federal environmental administrators.

Regulatory Aspects

Most of the environmental legislation passed over the past twenty years is regulatory in nature. As a consequence, natural resource agencies have greatly expanded their regulatory powers and controls. Agencies like the EPA and the Office of Surface Mining (OSM) are considered regulatory in nature. Some agencies like the U.S. Forest Service and the BLM have regulatory functions as parts of their overall operations. And a traditional land management agency like the U.S. Fish and Wildlife Service has acquired significant regulatory powers through such acts as the Endangered

Species Act and the Fish and Wildlife Coordination Act. The latter is like a national environmental protection act for fish and wildlife whereby the impact of proposed federal projects on fish and wildlife habitat is ascertained prior to the granting of development permits. Generally administrative regulations of natural resource agencies have few punitive powers and do not have the strong controls that are given to agencies with police powers and recourse to the courts. In this sense the strong regulatory controls of the EPA contrast with the much weaker advise and consent powers of most natural resource agencies. Theodore Lowi points out, "most regulated conduct is subject to less serious restraints. Moreover, the restraints are intended not to eliminate the conduct but to influence it toward more appropriate channels or locations or qualities of service."[54] In this manner regulatory efforts of natural resource agencies are directed primarily toward the minimization of the negative consequences of federal and private activities or developments.

The primary task of agency personnel in the regulatory process is to translate law into operating policies. Their ability to develop satisfactory policies is related to the amount and type of administrative discretion they are granted to decide when, where, and how to interpret the law. Often the degree of discretion is correlated with the ambiguity or indefinite nature of the law and situation.

As a result of the complexities involved in the development of pollution control laws, Congress gives broad discretion to the administrator of the EPA. Within the general guidelines established by Congress, EPA officials promulgate technical regulations for the implementation of the laws. This pattern worked effectively until the 1980s when, in an effort to reduce the regulatory burden on business, Reagan appointees started to delay the issuance of rules required by the Resource Conservation and Recovery Act (RCRA) related to toxic substances. This prompted environmental groups to file a number of lawsuits successfully challenging EPA for the intentional delaying tactics.[55] Office of Management and Budget (OMB) officials further delayed environmental regulations through review powers obtained from Executive Order (EO) 12291. However, District Court Judge Thomas Flannery declared "that OMB has no authority to use its regulatory review under EO 12291 to delay promulgation of EPA regulations arising from the 1984 Amendments of the RCRA beyond the date of a statutory deadline."[56] The judge acknowledges that this may be an intrusion into the flexibility of executive agencies but the court must uphold the law as passed by Congress.

The less precise Congress is in its laws, the more discretion agencies

have in policy implementation. Thus, vagueness in wording of policy objectives, ambiguity over standards among experts, flexible compliance deadlines, and discretionary enforcement are some of the major factors that give agencies considerable administrative discretion. These factors provide opportunities for political bargaining as well as value judgments and conflicts. Without authoritative and definite rules, competing interests can exert influence in this discretionary vacuum and, consequently, on administrative judgments and policies.[57]

Ira Sharkansky points out that industries being regulated are the "most assiduous and the most successful in affecting agency rules and decisions . . . cozy relationships and outright illegalities tilt decisions in the direction of industries."[58] The quality of regulation in environmental protection varies from one setting to another and regulation appears to "depend on the nature of legal mandates, the resources provided, and simply good or bad luck in the severity of the problems faced."[59] Alan Stone defines regulation as "a state-imposed [governmental] limitation on the discretion that may be exercised by individuals or organizations, which is supported by the threat of sanction. The term regulation is pertinent when decisionmaking in a branch of activity is apportioned between what may be termed the private and public spheres."[60] Thus regulatory decisionmaking involves discretion and limitation in both the public and private sectors.

In commenting on the success of the regulatory decisionmaking process from the agency perspective, William Drayton suggests that "Regulatory law enforcement, from the time a violation is detected onward, is a mess. . . . If jawboning fails to induce compliance, regulators must either give up or litigate, and litigation is uncertain, slow, and costly. . . . As a result, massive delays occur, public and private resources are wasted, scofflaws are rewarded, and voluntary compliance is undermined."[61] To avoid this sort of wasteful confusion, Drayton recommends using "recapture" standards that charge violators an amount sufficient to make compliance as economically attractive as possible. This permits agencies to adopt a host of economic remedies and options in between ineffective jawboning and legal action in the courts.

Much of the resistance and criticism associated with regulatory activities is economic in nature. Frank T. Cary, chairman of the Business Roundtable Task Force on Government Regulation, remarks:

> But today the regulatory pendulum has swung too far the other way [and] has imposed on business excessive costs which often exceed their benefits. And since 1973 these costs may have been cutting our

rate of productivity increase by nearly half a percentage point every year. In the imposition of regulations, I believe our government has been inflexible on methods of compliance and insensitive on costs.[62]

There is also the danger of "agency capture" of the regulators by those who are regulated. Marver Bernstein theorizes that regulatory agencies evolve through life cycles. At the outset the regulatory agencies attack the industries vigorously in order to eliminate abuses. After a period of time the industries respond and the situation improves or the agency becomes frustrated with its inability to force the industry to comply. Eventually the regulatory agency views the industry as an important constituency necessary for its long-term survival and becomes responsive to the needs and desires of the industry that it was created to regulate initially.[63]

Thomas Murphy argues that regulatory reform is needed and that it should emphasize economic analysis. He believes that this would force agencies to evaluate the costs of proposed regulations and consider less costly alternatives for getting the desired benefits. Murphy recommends putting regulatory "teeth" in substantive regulations where numerous remedies may be included to gain compliance. The "teeth" range from withdrawal of all government contracts to fines and imprisonment. For example, the EPA's 2,000 pages of regulations on hazardous waste disposal contain provisions for violators to be fined $25,000 a day and, upon a second violation, to spend up to two years in prison. Murphy concludes that regulations are basically laws delegating power from Congress and the courts to regulators. Regulatory matters are considered to be too complex, detailed, or specialized for either Congress or the courts. Hence the regulators make and interpret the law while also enforcing and judging it.[64]

Where burdens and costs to the private sector are concerned, there are other factors that need to be taken into consideration. A Resources for the Future (RFF) study on this topic considers the effects of environmental regulations on the U.S. economy to be adverse but minor. Other factors such as the energy crisis and changes in the labor force may be far more responsible for economic difficulties. Further, most economic indicators show the costs but ignore benefits that result from environmental controls in terms of overall effects and social well-being.[65]

The direct effects of pollution control expenditures have been relatively small. Analysis indicates that the direct costs of environmental regulation probably are only 8 to 12 percent of the decline in growth rates. In arguing for efficiency and economic incentives to offset the effects of indirect costs, Kent Price suggests: "Perhaps more important than the direct costs,

however, are the adverse effects on the economy that often result from the poor implementation and administration of regulations. It is impossible to account fully for costs associated with regulatory delay, for example, or from increased paperwork burdens, but the costs are nonetheless real." A very important cost is the uncertainty that is inherent in the regulatory process. Private interests do not know to what degree which regulations will be implemented, let alone what standards will change in the future. These uncertainties affect investment and economic production.[66]

Paul Weaver argues that regulatory policy is not economic policy but that it is social policy that transcends the economy and marketplace and does not make sense economically. As social policy, it is government intervention to advance the public interest apart from or opposed to the outcomes of the marketplace. Thus regulatory policy includes class politics with different sets of values or "world views" for society which government, in turn, asserts in its regulatory activities. Weaver considers a cardinal principle (or value) of environmental regulations to be that of "internalizing the externalities" with industry and consumers paying the social (and environmental) costs of goods and services.[67]

It would be a mistake, however, to presume that internalization of externalities is exclusively a political process. Science and technology have thoroughly permeated our society to the extent that scientific and technological factors influence the decisionmaking process.[68] Environmental regulation has a high scientific and technological content that complicates the implementation of effective decisions. Data gathered out of scientific and legal necessity serves multiple interests. While decisionmaking must incorporate political values, there is still a general consensus that the assembly and interpretation of relevant and scientifically valid information is essential to environmental policymaking. Beyond that, there is no general agreement as to what roles highly competent scientists should play in the decisionmaking process.

Political considerations can override scientific and technical ones. In contrast to previous presidential administrations, the Reagan administration developed and implemented dramatic reversals through its deregulation policy, drastically affecting the quality and quantity of environmental regulation. This policy involved "sharp cutbacks [funding, personnel, programs, and emphasis] in the enforcement of virtually every kind of environmental regulation."[69]

Craig Reese notes that budget and staff cuts at the EPA, Council on Environmental Quality (CEQ), and Office of Surface Mining (OSM) resulted in a significant reduction in environmental regulation enforcement ef-

forts.[70] Also the reorganization of both the EPA and OSM resulted in a deemphasis of enforcement activities. The apparent assumption was that business and industry would voluntarily comply especially if environmental regulations were simplified. Under the Reagan administration, CEQ's guiding principles changed toward: (1) an emphasis on regulatory reform including extensive use of cost-benefit analysis to determine the value of regulations; (2) reliance on the free market for resource allocation; and, (3) a shift of responsibilities for environmental protection to state and local governments when feasible. This reduced the role of the federal government in controlling the social costs associated with resource development and pollution.[71] Furthermore, the shifting of environmental regulatory responsibility to the states reduced the capacity of government to deal with environmental problems such as the degradation of air and water quality that are not confined within state and other political boundaries.

Concerns about energy supplies prompted the federal government to initiate actions by the late 1970s to relax environmental standards and regulations for air and water quality, strip mining, and other energy-extracting industries. Such deregulation activities were greatly accelerated under the Reagan administration.

Serious questions can be raised about the nature of regulatory measures and activities of various agencies. Regulatory agencies and personnel are often captured by the very industries that they are trying to regulate. Although public opinion surveys show that most Americans still want strict enforcement of environmental laws, even if it requires economic sacrifice, political, and governmental support for environmental protection. Nevertheless, environmental protection in the 1980s weakened substantially.

The degree of support can be questioned further in terms of the actual incorporation (and depth) of environmental values and perceptions into the operations of the regulatory bodies themselves. Low internalization of such values is reflected in weak enforcement of regulations. For example, the EPA is considered the major American regulatory agency for executing federal laws for protecting the environment. Yet EPA is increasingly involved in serious problems and controversies over generally ineffectual regulatory enforcement as its responsibilities and the complexities of its tasks increase. EPA is attacked by environmentalists, industry, and federal development agencies alike. Formed in 1970 to consolidate in one agency much of the federal authority and expertise for the control and abatement of pollution and other environmental problems, the EPA is unique in regulatory politics. Noting its strong congressional mandates and adversarial image, Gregory Daneke argues that the EPA was designed to "(1)

avoid capture by the industries it was to regulate, and (2) function in such a way as to limit its own discretionary powers and increase legislative responsibility."[72]

EPA and other regulatory agencies face a number of serious problems. Among them are: (1) trying to fulfill missions and meet deadlines that are not scientifically or technologically feasible; (2) trying to balance the high front-end costs of control technologies against intangible environmental and public health benefits; (3) acting effectively to regulate new energy technologies during a period of declining fossil fuel reserves; and (4) promoting nonproductive control technologies to a society already experiencing the belt-tightening effects of a declining economy.[73] Under these conditions, regulatory activities tend to become increasingly relaxed and ineffective.

As noted previously, the EPA was particularly hard hit in the 1980s, suffering personnel, budget, and program cuts all of which reduced the agency's ability to conduct its regulatory functions. Richard Andrews observes: "It is unfortunate that much of the legitimate conservative agenda that Reagan's administration might have achieved thus appears to have been lost to bad judgments that easily could have been avoided and to continuing ideological rigidity. It is also tragic that so much damage was done in the process both to environmental protection and to the cause of regulatory reform."[74]

Assuming the continuance of prevailing trends toward deregulation during a period of political conservatism and economic stagnation, regulatory efforts should be directed toward negotiation and planning for effective public and private controls and innovations. Cooperative environmental planning by the public and private sectors would facilitate the achievement of social goals.[75] Gail Bingham observes that proponents of regulatory negotiation consider current regulatory procedures too adversarial for resolving disputes; that this legalistic framework encourages "costly rounds of administrative appeal and litigation" that postpone "the achievement of desired goals, and may prevent exploration of mutually acceptable alternatives."[76]

Various innovations are obviously needed in order for regulatory reforms to produce better and more sound rules. Over the past several years requirements for rule making have made it a more open process. Those affected by the rules have to be heard. EPA rule making now requires procedures that have definite steps that include defining alternative approaches and explaining why the recommended approach is preferable. This includes routinely evaluating a vast array of potential environmental,

energy, and social impacts that may result from the proposed actions under consideration.[77]

Regulations are an increasingly important part of natural resource agency administrative operations. In reviewing the numerous environmental laws and regulations that apply to the BLM, agency personnel consider future trends and developments to be:

> more laws and regulations concerned with environmental protection. As resources become inevitably more scarce and concurrent demand becomes more intense, the conflicts will also increase. The necessity to resolve these conflicts will put greater pressure on government at all levels to become the mediators of these conflicts. Government's normal approach to this mediation is to enact new statutes and promulgate new regulations.[78]

Regardless of the merits of the law and regulations, much depends on how they are administered and enforced by the agencies and their personnel. The environmental public interest may be negatively affected through administrative discretion that gives too much to the regulated industry by placing private interests above public ones. A good example is the manner in which western cattle and sheep owners continually get excessive grazing privileges on public lands at unrealistically cheap prices. Sabine Kremp notes in her assessment of the BLM grazing policy that "the grazing fee underestimates the full value of the additional grazing by a sizable amount (50 percent or more)."[79] Problems also occur because of too much or too little regulation or control in a given situation.

The Reagan administration broke away from the theme of discretion for environmental administration and regulations. Howard McCurdy concludes that the three "new" themes of the Reagan administration were: (1) use of economic criteria with economic incentives and real prices attached to environmental decisions and the expansion of market influence; (2) "new federalism" with a glorification of the states and a cutback of federal involvement in pollution control and land management programs and regulations; and (3) a new kind of administration with less government (including policy and administration) and less regulation, in contrast to traditional public administration considerations.[80]

Regulations are the primary means for society through government to have some control over human relationships and behavior toward the environment. Regulations provide controls for mitigating or preventing negative and often irreversible consequences for the environment and society. Regardless of the administrative approach, regulations involve

the interface of values between public and private sectors and between organizations and individuals in terms of the environment. This interface brings out both the rational and irrational aspects of regulations affecting the degree to which they will be enforced. Thus the strength and depth of underlying values and their power base determine much of the regulatory process and its results.

The regulatory process also involves interagency relations with various forms of conflict and cooperation. For example, several agencies may have a common jurisdiction or "symbolic territory" while at the same time possessing their own mandates and individual sets of regulations. Agencies may have mandates that conflict with each other or require clearance from other regulatory bodies. One agency may have regulatory functions over another that may offer resistance. For example, EPA has had considerable difficulty getting the Tennessee Valley Authority (TVA) to comply with air pollution requirements. EPA eventually had to take court action against and enter into negotiations with TVA to gain compliance. Federal, state, and local agencies implement federal laws and regulations. Interrelationships between different levels of government and agencies are fluid and the courts generally protect state sovereignty. Successful cooperation in regulatory arrangements often involves informal activities composed of networks of individuals from various agencies formulating and negotiating policies concerning what is acceptable to the system.[81] The regulatory process is one important aspect of interagency relations.

Interagency Relations

The NEPA contains numerous provisions calling for interagency coordination and review of environmental quality. For example, with respect to environmental impact statements NEPA specifies: "Prior to making any detailed statement, the responsible federal official shall consult with and obtain the comments of any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statements and comments and views of the appropriate federal, state, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available."[82]

The environment thus provides a new focus and potential for meaningful and effective interagency relations. According to the Library of Congress, there are eighty federal departments or agencies that have responsibilities in the area of environmental affairs. With the addition of numerous state and local government agencies, interagency relations obviously require a

focus for unity of action. The development of an environmental focus will not end perennial political conflicts between agencies. An environmental context will subject incompatible objectives to fuller consideration in terms of issues and values. Norman Wengert stresses that:

> The environment is a unity, but resources are discrete—hence a problem of coordination arises when an effort is made to reconcile resource-centered programs and agencies with comprehensive environmental goals. . . . Coordination of public programs dealing with or affecting many different facets of the environment superficially, at least, would seem to leave much to be desired. In many cases little or no coordination is apparent, separate programs going their separate ways. In other cases coordination is only *pro forma* and superficial. Given that those planning and conducting particular programs with obvious interrelationships have not consulted together, and in many cases programs dealing with similar or related problems may be seeking different and even conflicting goals or objectives, the pluralism of our society has been projected to government activities.[83]

Resistance to interagency coordination also takes the form of an agency's strict adherence to lines of responsibility in specific environmental situations. Under restrictive guidelines personnel are often frustrated and kept from effective interagency cooperation in a holistic approach to the environment. In this sense overlapping and duplication may not be so much the problem as lack of authorization to take unified action. Informal cooperation may occur among specialists, particularly at field levels, but it may also lack the sanction of the agencies. Such informal activity may therefore lack real power for concentrated long-term action.

Although "memoranda of understanding" made between agencies formalize cooperative arrangements, these agreements usually distract the agencies concerned into defining their responsibilities and limiting any policy innovations or other commitments. A relevant case is the Interagency Wildlife Committee, which was established to handle overpopulation and migration of elk at Rocky Mountain National Park in Colorado. Wildlife specialists from five agencies were involved, but the committee soon found that it could not really make any policy or even policy recommendations for a flow resource on a regional and interagency basis. Its duties consisted of a superficial exchange of information and research.[84]

With failure at the interagency level to address and express concern over values, participating agencies will act out of their own more limiting value orientations while making only token efforts at interagency cooperation.

Consequently, unintended "hidden" values and negative consequences may emerge from interagency deliberations. A forest management agency may, for example, authorize logging operations detrimental to the protection of watershed under the jurisdiction of another management agency, in spite of apparent efforts at interagency cooperation. Wolfinger, Shapiro, and Greenstein indicate that "Differences between agencies are compromised; unresolved conflicts are papered over by vague generalizations. A false front of harmony is established behind which each agency continues in its own way."[85]

This phenomenon also applies to lateral coordination in interagency clearance systems wherein reports, evaluations, EISs, and policy recommendations are cleared by other agencies involved in the same spheres of operations before being sent to higher authorities. Because agencies do not want their reports to pass on with dissenting opinions, they will usually modify the content of a proposal or its language to meet the objections of other agencies. The end results of interagency clearance may be compromises that "paper over" differences and avoid proper value considerations.

Many values and concepts of the International Union for the Conservation of Nature and Natural Resources (IUCN) World Conservation Strategy, for example, can be considered new for many agencies. However, they will not be incorporated into various programs and interagency relations without political and administrative support. Ecosystems and the effects of development seldom observe institutional or political boundaries. Therefore, they must be approached on a cross-sectorial, coordinative basis. In this context of interagency inertia the World Conservation Strategy recommends: "The different agencies with responsibilities for living resources should have clear mandates and such mandates should specifically include conservation; there should be a permanent mechanism for joint consultation on and coordination of both the formulation and implementation of policies."[86] These recommendations grow out of an explicit understanding that ecosystems and the effects of development fail to recognize institutional boundaries.

Interagency relations generally require a form of central control or major mechanism (institutional form) to ensure needed coordination and cooperation for a comprehensive and effective approach toward the environment. This overall approach is necessary to avoid serious conflicts and negative actions by individual agencies relative to the environmental public interest. Growing efforts are under way by many agencies and personnel to achieve interagency relations based on general environmental values and integrated components. These efforts must be supported, however, by

sufficient political power to transcend the immediate interests of individual agencies. Finally, changes within the agencies, innovative communications, and new forms of interagency arrangements are needed to facilitate common environmental approaches and unified, coherent actions throughout the administrative process.

Decisionmaking is possibly the most important aspect in the administrative process. The foregoing material illustrates the extreme complexities involved in assuring that appropriate value considerations enter into this process. At all decisionmaking levels the environmental public interest must be considered. In a closed decisionmaking system this is not likely to occur. In order for past achievements in the environmental arena to be maintained and satisfactory future objectives to be achieved, changes will be required. This can only be accomplished through the "Substitution of the paternalistic dictates of policymakers, scientists, and special interest groups with a participatory evaluation and decisionmaking process; [and a] reenforcement of quantitative research with qualitative evaluation of scientific information and public values."[87]

Objects (Los Altos, Calif.: William Kaufmann, 1974), 1–42.

42. Tarlock, "Environmental Law: What it is, What it Should Be," 1347–48.
43. Robert V. Bartlett, "Rationality and the Logic of the National Environmental Policy Act," *Environmental Professional* 8 (1986): 105–11.
44. Sheldon M. Novick, "The 20-Year Evolution of Pollution Law: A Look Back," *Environmental Forum* (January 1986), 12–18.
45. Gregory Wetstone and Sarah A. Forster, "Acid Precipitation. What Is It Doing to Our Forests?" *Environment* 25, no. 4 (1983): 10–12.
46. *International Environmental Law Reporter* 7 (1984): 8.
47. Wolfgang Burhenne, Alexandre Kiss, and Malcolm Forster, "Environmental Policy and Law," in Francis R. Thibodeau and Hermann H. Field, eds., *Sustaining Tomorrow: A Strategy for World Conservation and Development* (Hanover, N.H.: University Press of New England, 1984), 111–18.

Chapter 3

1. Lynton K. Caldwell, "The Public Administration of Environmental Policy," in Stuart W. Nagel, ed., *Environmental Politics* (New York: Praeger, 1974), 297.
2. Talcott Parsons, *Structure and Process of Modern Organization* (New York: Free Press, 1969), 1–15.
3. Carl H. Reidel, "Wasteful Organizational Practices," in R. Rodney Foil, ed., *Organizational Management in Forestry* (Baton Rouge: Louisiana State University Press, 1969), 71.
4. Jack H. Knott and Greg J. Miller, *Reforming Bureaucracy: The Politics of Institutional Choice* (Englewood Cliffs, N.J.: Prentice-Hall, 1987), 1.
5. Robert V. Bartlett, "The Budgetary Process and Environmental Policy," in Norman J. Vig and Michael E. Kraft, eds., *Environmental Policy in the 1980s: Reagan's New Agenda*, 121–42.See also NWF, *The Full Story Behind the EPA Budget Cuts* (Washington, D.C., 1982).
6. Douglas Price, "Organizations: A Social Scientist's View," *Public Administration Review* (Spring 1959), 127.
7. Joel Fleishman and Bruce L. Payne, *Ethical Dilemmas and the Education of Policymakers* (Hastings-on-Hudson, N.Y.: Hastings Center, 1980), 45.
8. Gordon Donaldson and Jay W. Lorch, *Decision Making at the Top* (New York: Basic Books, 1983), 111.
9. Fleishman and Payne, *Ethical Dilemmas*, 45–46.
10. See Geoffrey Vickers, *The Art of Judgment: A Study of Policy Making* (New York: Harper and Row, 1985).
11. Phillip H. Abelson, "Science and Immediate Social Goals," *Science* 3947 (August 21, 1970): 722.
12. Felix A. Nigro and Lloyd G. Nigro, *Modern Public Administration* (New York: Harper and Row, 1980), 72.

13. Raymond E. Wolfinger, Martin Shapiro, and Fred I. Greenstein, *The Dynamics of American Politics* (Englewood Cliffs, N.J.: Prentice-Hall, 1980), 518–19.
14. Herbert Simon, *Administrative Behavior* (New York: Free Press, 1947).
15. Ibid., 462–63.
16. Robert D. Behn and James W. Vaupel, *Quick Analysis for Busy Decision Makers* (New York: Basic Books, 1982), 16.
17. Carl V. Patton and David S. Sawicki, *Basic Methods of Policy Analysis and Planning* (Englewood Cliffs, N.J.: Prentice-Hall, 1986).
18. Henry Mintzberg, *Designing Effective Organizations* (Englewood Cliffs, N.J.: Prentice-Hall, 1983), 101.
19. Price, "Organizations: A Social Scientist's View," 127–28.
20. Herbert Kaufman, *The Forest Ranger: A Study of Administrative Behavior* (Baltimore: Johns Hopkins University Press, 1960), 91.
21. Ibid., 96.
22. Knott and Miller, *Reforming Bureaucracy*, 108.
23. Chris Argyris, "Understanding and Increasing Organizational Effectiveness," *Commercial Letter* (October 1968), 1–4.
24. Daniel H. Henning, "National Park Wildlife Management Policy: A Field Administration and Political Study at Rocky Mountain National Park" (unpublished Ph.D. dissertation, Syracuse University, 1965).
25. Ben Heirs and Gordon Pehrson, *The Mind of the Organization* (New York: Harper and Row, 1982), 55.
26. Nigro and Nigro, *Modern Public Administration*, 216–21.
27. Henning, "Natural Resources Administration and the Public Interest," 134–40.
28. Richard W. Behan, "The Myth of the Omnipotent Forester," *Journal of Forestry* (June 1966), 400.
29. Rosenbaum, *The Politics of Environmental Concern*, 96.
30. Emmette S. Redford, *Administration of National Economic Control* (New York: Macmillan, 1952), 262.
31. Peter Navarro, *The Policy Game: How Special Interests and Ideologues are Stealing America* (Lexington, Mass.: Lexington Books, 1984), 6.
32. Federal Register 45, no. 85 (April 30, 1980): 28916.
33. UNESCO Regional Office for Education in Asia and the Pacific, *Environmental Education in Asia and the Pacific: Report of a Regional Workshop* (Bangkok: UNESCO, 1980), 1–20.
34. Quoted in Edwin N. Winge, "Involving the Public in Park Planning:USA," *Parks* 3, no. 1 (April/May 1978): 2.
35. David Clary, *Timber and the Forest Service* (Lawrence: University of Kansas Press, 1986).
36. Barry Commoner, "Informing the Public: The Duty of the Scientist in the Environmental Crisis" (paper delivered to the Secrecy, Privacy, and Public Information Symposium, Annual Meeting of the American Association for the Advancement of Science, New York, December 29, 1967), 13.

37. David M. Lenny, "The Case for Funding Citizen Participation in the Administrative Process," *Administrative Law Review* (Summer 1976), 490–93.
38. Daniel Heinz, personal interview, October 23, 1986.
39. Harold Eidsvik, "Involving the Public in Park Planning: Canada," *Parks* 3, no. 1 (April/May 1978): 5.
40. W. R. Derrick Sewell and Susan D. Philips, "Models for the Evaluation of Public Participation Programmes," *Natural Resources Journal* 19 (1979): 337.
41. Paul Mohai, "Public Participation and National Decision Making: The Case of the RARE II Decisions," *Natural Resources Journal* 27 (1987): 123–55.
42. Ben W. Twight, *Organizational Values and Political Power: The Forest Service Versus the Olympic National Park* (University Park: Pennsylvania State University Press, 1983).
43. Paul J. Culhane, *Public Lands Politics: Interest Group Influence on the Forest Service and the Bureau of Land Management* (Baltimore: Johns Hopkins University Press, 1981).
44. Mohai, "Public Participation and National Decision Making," 155.
45. U.S. Congress, House Subcommittee of the Committee on Government Operations, 91st Cong., 1st sess., *Transferring Environmental Evaluation Functions to the Environmental Quality Council* (Washington, D.C.: GPO, July 9, 1969).
46. Caldwell, *Science and the National Environmental Policy Act*, 1.
47. Public Law 91-190, 91st Cong., S-1075 (January 1, 1970) 83, stat. 853, p. 2.
48. Caldwell, "The Public Administration of Environmental Policy," 285.
49. Daniel A. Farber, "Disdain for 17-Year-Old Statute Evident in High Court Rulings," *National Law Journal* 9 (May 4, 1987): 20.
50. Serge Taylor, *Making Bureaucracy Think: The Environmental Impact Statement Strategy of Administrative Reform* (Stanford: Stanford University Press, 1984), 136–56.
51. Caldwell, *Science and the National Environmental Policy Act*, 1–12.
52. Lynton K. Caldwell, Robert V. Bartlett, and David L. Keys, *A Study of Ways to Improve the Scientific Content and Methodology of Environmental Impact Analysis* (Bloomington: Indiana University, Advanced Studies in Science, Technology, and Public Policy, School of Public and Environmental Affairs, 1982), 412.
53. Taylor, *Making Bureaucracy Think*, 160.
54. Theodore J. Lowi, *Incomplete Conquest: Governing America* (New York: Holt, Rinehart, and Winston, 1981), 428.
55. Philip J. Cooper, *Public Law and Public Administration* (Englewood Cliffs, N.J.: Prentice-Hall, 1988), 2d ed., 244.
56. Walter Gellhorn, Clark Byse, Peter L. Strauss, Todd Rakoff, and Roy A. Schotland, *Administrative Law* (Mineola, N.Y.: Foundation, 1987), 161.
57. Rosenbaum, *The Politics of Environmental Concern*, 136–39.
58. Ira Sharkansky, *Public Administration: Agencies, Policies, and Politics* (San Francisco: W. H. Freeman, 1982), 333.
59. Ibid., 343.
60. Alan Stone, *Regulations and Environmental Quality* (Washington, D.C.: Congressional

Quarterly Press, 1982), 10–11.

61. William Drayton, "Economic Law Enforcement," *Harvard Environmental Law Review* 4, no. 1 (1980): 1.
62. Thomas P. Murphy, "Regulation: Have We Gone Overboard on It?" *Think* (September/October 1980), 23.
63. Marver Bernstein, *Regulating Business by Independent Regulatory Commission* (Princeton, N.J.: Princeton University Press, 1955).
64. Murphy, "Regulation: Have We Gone Overboard on It?" 21–25.
65. Kent A. Price, "Environmental Regulation—Direct and Indirect Costs," (RFF) *Resources* (March 1982), 19, 23.
66. Ibid., 19.
67. Paul H. Weaver, "Regulation, Social Policy, and Class Conflict," in Chris Argyris et al., *Regulating Business* (San Francisco: Institute for Contemporary Studies, 1978), 207–13.
68. J. D. Nyhart and M. M. Carnow, eds., *Law and Science in Collaboration* (Lexington, Mass.: Lexington Books, 1983).
69. Friends of the Earth et al., "National Conservation Groups Indict Reagan for 'Systematic Destruction' of Environmental Programs" (news release, March 30, 1982).
70. Craig E. Reese, *Deregulation and Environmental Quality* (Westport, Conn.: Quorum Books, 1983), 308.
71. Vig and Kraft, eds., *Environmental Policy in the 1980s: Reagan's New Agenda*, 4.
72. Gregory A. Daneke, "The Future of Environmental Protection: Reflections on the Difference between Planning and Regulating," *Public Administration Review* (May/June 1982), 227–28.
73. Ibid., 227–29.
74. Richard N. Andrews, "Deregulation: The Failure of EPA," in Vig and Kraft, eds., *Environmental Policy in the 1980s: Reagan's New Agenda*, 178.
75. Daneke, "The Future of Environmental Protection," 229–32.
76. Gail Bingham, "Does Negotiation Hold a Promise for Regulatory Reform?" *Resolve* (Conservation Foundation Newsletter, Fall 1981), 1.
77. U.S. EPA Office of Planning and Management, *Smarter Regulations* (Washington, D.C.: EPA, 1981), 1–2.
78. BLM, "BLM and the Environment," *Public Administration Review* (November/December 1982), 584–86.
79. Sabine Kremp, "A Perspective on BLM Grazing Policy," in J. Baden and R. L. Stroup, eds., *Bureaucracy in Environment* (Ann Arbor: University of Michigan Press, 1981), 142.
80. Howard E. McCurdy, "Public Administration in the Wilderness: The New Environmental Management," *Public Administration Review* (November/December 1982), 584–86.
81. Guy Benveniste, *Regulations and Planning: The Case of Environmental Politics* (San Francisco: Boyd and Fraser, 1981), 104–06.

82. Public Law 91-190, stat. 853, p. 2.
83. Norman Wengert, "Perennial Problems of Federal Coordination," in Lynton K. Caldwell, ed., *Political Dynamics of Environmental Control* (Bloomington: Indiana University, Institute of Public Administration, 1967), 42.
84. Henning, "National Park Wildlife Management Policy: A Field Administration and Political Study at Rocky Mountain National Park."
85. Wolfinger, Shapiro, and Greenstein, *The Dynamics of American Politics*, 466.
86. IUCN, *World Conservation Strategy*, sec. 11.
87. Climos A. Davos, "Environmental Management: Can We Afford Established Trends?" *Environmental Professional* 8 (1986): 205–310.

Chapter 4

1. Congressional Quarterly, *Energy and Environment: The Unfinished Business* (Washington, D.C.: Congressional Quarterly Press, 1985), 20.
2. Walter A. Rosenbaum, *Energy, Politics, and Public Policy* (Washington, D.C.: Congressional Quarterly Press, 1987), 8.
3. Don E. Kash and Robert W. Rycroft, *U.S. Energy Policy* (Norman: University of Oklahoma Press, 1984), 21.
4. James E. Katz, *Congress and National Energy Policy* (New Brunswick, N.J.: Transaction Books, 1984), vii.
5. Walter A.Rosenbaum, *Energy, Politics, and Public Policy* (Washington, D.C.: Congressional Quarterly Press, 1981), 5.
6. Robert Stobaugh and Daniel Yergin, eds.,*Energy Future* (New York: Ballantine Books, 1980), 271–94.
7. Michael D. Reagan, "Energy: Government Policy or Market Result?" *Policy Studies Journal* 11, no. 3 (1982): 383.
8. Hans Landsberg, "U.S. Energy Priorities," *Resources* (Spring 1981), 2.
9. Katz, *Congress and National Energy Policy*, 7–8.
10. Rosenbaum, *Energy, Politics, and Public Policy* (1981), 130–31.
11. Milton Russell, "Energy in America's Future: The Choices Before Us," *Resources* (September–December 1979): 1–4.
12. Ibid., 2–4.
13. Amory B. Lovins, *Soft Energy Paths: Toward a Durable Peace* (Cambridge, Mass.: Ballinger, 1977), 4.
14. Albert J. Bartlett, "Forgotten Fundamentals of the Energy Crisis," *American Journal of the Energy Crisis* (September 1978), 876–87.
15. *Interim Report of the National Research Council Committee on Nuclear and Alternative Energy Systems* (Washington, D.C.: National Academy of Sciences, 1977).
16. Jeremy Rifkin, *Entropy: A New World View* (New York: Viking, 1980), 6.
17. Pietro S. Nivola, *The Politics of Energy Conservation* (Washington, D.C.: Brookings Institution, 1986), 1.