

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Environmental Decisionmaking and Collaboration

Good decisions come from good information. However, environmental decisions are often made by relying upon scientific and economic expert opinions and information -- to the exclusion of other sources. This reliance has limited the range of potential solutions. Excluding information can result in a failure to develop or consider potential alternatives that fall outside those scientific and economic boundaries (Shiva, 1988). In particular, information that reflects aesthetic, spiritual, ethical, intrinsic, or normative values is often ignored. Environmental values expressed by people in terms laden with emotions are discounted in the environmental decisionmaking process (Caldwell and Shrader-Frechette, 1993). Thus, while public decisions should reflect the character of a society, many of the noneconomic environmental values held by the public may not be incorporated into environmental decisions.

Environmental problems occur where ecosystems and human social systems converge (Dryzek, 1997). These problems cannot be completely resolved by science or technology because they are partly a result of the diversity in human perceptions, expectations, and values (Caldwell, 1993). Scientists readily admit that our knowledge of ecosystems is limited by their inherent complexity, and because human society is also complex, environmental problems are compounded. This makes good solutions difficult to achieve. Since the various parties involved in an environmental issue bring different interests, values, information, positions, concerns, and power with them, contentious situations often develop. In the realm of public policy and planning, when advocates of

different positions have disparate positions or concerns, utilizing authoritative means may not be an effective way of reaching goals and objectives. As a result, some decisionmakers are beginning to resolve matters by means of collaborative techniques.

In its most basic form, collaboration is simply people working together. In terms of planning, collaboration is a communicative approach to problem solving based upon an application of social learning theory. Social learning acknowledges that people naturally resist change and believe their opinions are the only possible correct ones. Collaboration attempts to overcome these barriers by linking formal, theoretical knowledge to informal, practical wisdom through face-to-face dialogue among contending parties (Friedmann, 1987). The usual categorizing of parties as adversaries is altered as participants in a decisionmaking process try to reach well-conceived decisions that are respected by all. This approach fosters civic dialogue, features good science, and incorporates local knowledge into discussions, discourse, and open meetings. Collaboration acknowledges that decisionmaking should involve all interested stakeholders in a procedure that can produce several alternative solutions to existing problems. Reaching mutual understanding enables parties to solve problems that should not be determined by an individual (Selin and Chavez, 1995). This form of collaboration employs participatory democracy and civic discourse in reaching decisions by stressing cooperation, involving a wide range of participants, and introducing noneconomic values to a decisionmaking process (Dryzek, 1990).

Collaborative processes are being utilized to build consensus and foster creative alternatives and solutions through a convergence of the positions of the people participating in the process. In this sense, by “position” is meant the particular stand taken by a

participant with respect to an issue, and an “issue” is a matter that is under concern or dispute over its condition, significance, importance, substance, or magnitude. What may be underlying and shaping these positions and issues are a participant’s “values” -- subjective characterizations or attributes of conditions or objects that are deeply held by the participant and indicate that person’s basic preferences. Thus, while convergence of positions on issues may be driving a collaborative decisionmaking process, the participant’s values may be the foundation upon which the process rests.

## **1.2 Research Questions**

Collaborative decisionmaking is a means of involving all of the participants affected by a decision in the process of resolving the matter. The purpose of the research documented in this work is to identify instances of collaborative environmental decisionmaking and answer the following questions about the process:

- What are the elements of a collaborative environmental decisionmaking process?
- How do collaborative processes transpire in an environmental decisionmaking setting?
- Does collaborative environmental decisionmaking work, and if so, why?

The research objectives of this study are to identify collaborative environmental decisionmaking processes, to determine the basic elements of these processes, and to find out whether a collaborative process is a viable means of making environmental decisions.

## **1.3 Relationship of this Study to the Literature**

While analyses of collaborative environmental decisionmaking are growing in the literature, there are few in-depth case studies and even fewer investigations that illustrate and link the theoretical aspects of collaboration to actual case studies. Attempts to explain

how and why the process works in an environmental problem setting context, combined with “real life” case studies, are needed.

This study utilizes the theoretical views of Habermas (1984), Dryzek (1990) and Healey (1997) on the need for civic discourse; Forester (1993, 1990) on the loss of value considerations; Pateman (1970), Tokar (1997) and Cahn (1995) on participatory democracy; and Gray (1989), Healey (1997), Chrislip and Larson (1994), and Forester (1993) on collaboration. It employs the case studies of Reilly (1998), Selin and Chavez (1995), Paulson, (1998), Moote and others (1997), and Daniels and Walker (1996) to develop procedures and make comparisons, and then applies this knowledge to actual occurrences of collaborative environmental decisionmaking.

#### **1.4 Organization of this Study**

This Chapter (One) provides an overall look at the study in terms of its origin, how it developed, and what it is trying to accomplish. Chapter Two discusses the relevant literature on collaboration, participatory democracy, science, economics, and values. Chapter Three outlines the methods used in the study. Chapter Four describes the elements of collaborative environmental decisionmaking. Chapter Five presents the first case study and Chapter Six the second. Chapter Seven compares the two case studies. Chapter Eight discusses the findings from the case studies in terms of their relationship to the existing body of knowledge. Chapter Nine presents the conclusions stemming from the findings and discussions, and the implications to be garnered from this work.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Participatory Democracy

Democracy is a process of citizen involvement in government planning and policy making. It is a means of giving decisionmaking power to the public (DeSario and Langton, 1987, p.5). A representative democracy involves a competition for leadership. A person obtains the power to make decisions after successfully competing for votes from individual members of the public by making known his or her policy beliefs (Pateman, 1970, p.4).

The basis upon which the modern, representative democracy rules is the legal authority that stems from a code of laws established by representatives of the governed. These laws form the boundaries within which the nation is constrained to act. Agencies of the state execute the laws according to procedures established by the people's representatives. The citizens of these nations respect state authority because it is bound by restraints that the people themselves have established (Held, 1996, p. 164). Theoretically, the act of voting by the public for the leader they favor enables the electorate to determine policy. The job of the elected representative is to reach the goals he or she set when courting the public for their votes -- the means of getting there is left to the elected official (Kweit and Kweit, 1987, p.25). This process leaves a great deal of power with the elected leader. Once in office, the leader is completely free to choose a different course. This new direction can result in decisions that are independent of public opinion. While this general democratic scenario predates capitalism, it helped enable its rise and continues to give it sustenance (Held, 1996, p. 164).

Half of all eligible American citizens do not vote, and people remain poorly informed about public affairs and politics (Bachrach and Botwinick, 1992). Polls reveal little dedication to democratic core values such as freedom of speech, freedom of religion, individual rights, and due process of law (Bachrach and Botwinick, 1992, p.21). Democracy is not advanced when a majority of the electorate does not participate in the political process and relies on elites, lobbyists or activists to represent their positions to decisionmakers (Tokar, 1997, p. 213). Yet, some political theorists believe that this political process normally operates best with only a few, interested citizens taking part at high levels (Pateman, 1970, p.7). An active public would actually hinder the ability of elites to take advantage of slack resources (Bachrach and Botwinick, 1992, p.27). Thus, the contemporary political process may hinge on the participation of a minority elite. The non-participation of the ordinary citizen may be crucial to the stability of the current political process (Pateman, 1970, p.104).

While legislation can create new laws or alter current ones, the activities of citizens are bounded by the limits of existing law. For the first 200 years of its existence, the federal government was primarily expected to provide for the general health and welfare of citizens, maintain economic stability, and keep the nation secure and free from external dangers. However, beginning in about 1970, federal responsibilities expanded into the environmental realm as a result of widespread public interest (Cahn, 1995, p.121). Yet, while environmental issues have become part of the public discourse and policy agenda, some claim policy implementation has been relatively insubstantial (Cahn, 1995, p.122). This view posits that even 30 years after the passage of major environmental legislation, the federal government remains dominated by economic elites continually trying to

privatize public services, weaken environmental laws, and promote policies favoring greater accumulation of wealth and privilege. In recent years, Federal legislation has only been able to offer only small, incremental improvements in environmental policy in response to changed conditions (Tokar, 1997).

Participatory democracy rejects the encumbrances that a hierarchy places on public dialogue and includes all citizens in social discourse over issues (Moote and McClaran, 1997). It reflects the belief that those influenced by a policy should play a direct part in its determination (Kramer, 1972, p.13). A participatory democracy can provide individuals with the opportunity to have a meaningful role in determining the laws that govern them (Kramer, 1972, p.16). It encourages self-development, self-exploration, and self-governance (Kramer, 1972, p.213; Bachrach and Botwinick, 1992). Self-development provides a sense of personal identity and interest in combination with an increased recognition of others through dialogue and interaction (Bachrach and Botwinick, 1992, p.29). It can result in a redistribution of power and greater democratization of the political process (Bachrach and Botwinick, 1992). The essence of participatory democracy is expressed by the interdependence between participation and the sharing of political power (Bachrach and Botwinick, 1992, p.11). It is based on an assumption that not only will people develop their “selves,” but they will also be able to expand this self-interest to include the well-being of others (Bachrach and Botwinick, 1992, p.20). It develops responsible individual social and political action (Pateman, 1970, p. 105).

Participatory democracy results in greater citizen input in public processes at the local level because of personal interest, familiarity with the issues, easy access, and lack of bureaucratic complexity. The local level becomes the site of social and environmental

reform (Cahn, 1995, p.220). However, local people tend to resist change. Outsiders in the form of government agencies or special interest groups have come in to communities unknowledgeable about and uninterested in local ways of doing things (Kellert, 1996, p.178). In rural areas where the people are dependent upon utilizing natural resources to make a living, the locals usually oppose environmental initiatives due to the perceived threat to their way of life. Government agencies and environmental groups compound the problem by failing both to identify the benefits of environmental protection to the local community and by failing to establish some means of assuring that decisionmaking is retained at the local level (Kellert, 1996, p.179). Yet, local people often have reliable, detailed knowledge that can be of tremendous value and use in forming and defining environmental issues. This source of information has often been ignored or overruled by decisionmakers in favor of government, corporate, or academic experts. Experts are used to legitimate the exclusion of local experience and to depreciate the perspective of local people (Cohen, 1993). This subversion of local participation discourages participatory democracy (Pena and Gallegos, 1997). However, local knowledge can be applied to issues by fostering civic dialogue. Because the local level is a natural base for social and environmental reform, some political theorists are advocating that participatory democracy is the political system of the future (Desario and Langton, 1987, p.209).

## **2.2 Collaborative Decisionmaking**

Collaborative decisionmaking is a fairly new concept; it arose in response to problems in the fields of business, government, labor, and the environment (Selin and Chavez, 1995). It is an evolving process with roots in alternative dispute resolution (ADR). In turn, ADR techniques are a result of the shortcomings of litigation. In the courtroom,

legal rights are asserted and defended as actionable privileges (Habermas, 1984, p. 108). The laws of governments and the actions of both governments and individuals reach ultimate definition and resolution in front of an adjudicating authority. In the policy arena, interactions center on the distribution of collective goods. In the courtroom, legal rights are asserted and defended as actionable privileges (Habermas, 1984, p. 108). Unfortunately, this does not mean that some utmost “truth” is reached. In fact, in the United States, the legal system has fashioned truth into a choice between two opposing allegations, even though the truth may lie outside those two choices (Zimmerman, 1994, p.101). Courts are authorized by law to rule on the specific facts of a given situation or on the legal questions brought before them by disputing parties. The law segments and restricts complex and interrelated problems into discrete compartments and limits the information considered. Each party is forced by the adversarial character of the legal process to represent its position as the morally correct one (Reed, 1995, p. 14). Because of this, litigation results in a “winner takes all” resolution of the dispute. Judges rarely mandate compromises or work with the parties to consider options and alternatives. A judge is not able to bring as great an understanding of the content and extent of the problem to the court as the parties to a negotiation are able to bring to the table. These concepts make it almost impossible to reach a solution that could support the interests of all parties involved (Susskind and Cruikshank, 1987, p. 70). Litigation usually addresses procedural issues. Substantive policy issues remain in the agency domain.

Since the scope of judicial review is ordinarily limited to interpreting the law or interpreting actions in terms of the law:

- There is no consideration in court of potential alternative solutions;

- All affected parties are usually not a part of the action;
- The positions of the parties are polarized; and
- The parties are discouraged from communicating with one another.

When a legal decision is made, it is based on some existing point of law, but the judge's or jury's decision is influenced by personal belief systems, values, and ethics.

Justice is never blind. Even after a court decision is decreed, a controversy can remain unresolved if the loser chooses to appeal the decision to a higher body -- a process that can take years (Ryan, 1995, p.206).

People can seek means other than litigation to address an issue. There are other forums available to citizens that may be more favorable to their particular positions. Instead of bringing a lawsuit in front of a judge, a party can seek redress before a government agency or administrator, a constituent can lobby Congress (either directly to his or her representative or to a Congressional committee), or an individual can attempt to influence public opinion and sway an election (Klase, 1995, p.104). There is also the option of acting external to the rule of law and carrying out an act of civil disobedience. Nonhuman entities such as wildlife, ecosystems, and trees have no rights.

ADR is a response to the limitations of courts in terms of both their responsibilities and their capabilities. Because the participants in ADR have to live with the results, they are more understanding of the ultimate effects and impacts of the solution than a judge whose involvement is over when the order or decree is issued. As a result, it is much more likely that substantive issues will be addressed by ADR (Bacow and Wheeler, 1984, p. 18).

ADR includes negotiation, mediation, facilitation, and arbitration; features of these processes can be found in collaboration. Negotiation refers to direct interactions among the

parties, with or without a neutral third party (Bingham, 1986, p.5). It identifies problems as conflicts between parties' needs, desires, concerns, and fears, and focuses on interests as opposed to personalities. Parties are treated as problem solvers (Fisher and Ury, 1991, p.40). Since people will only take part in negotiation if they think the potential outcome is better than can be achieved through some other means, the issues must be clear, core values cannot be in conflict, and there must be a means of implementing any final agreement (Bogdonoff, 1995, p. 152). Minority or less influential interests may see little significance in negotiation if the only possible outcome will gloss over their interests (Reed, 1995, p.15). Mediation requires the intervention of an impartial third party. The mediator assists the process by helping the parties reach a solution acceptable to all concerned (Klase, 1995, p.86). The distinction between mediators and facilitators is very hazy (Bingham, 1986, p.5); they both identify the parties, assess the dispute, clarify values, resolve power and information discrepancies, and create trust (O' Leary, 1995, p.298). However, facilitators concentrate primarily on process and do not advance their own proposals. They weigh the quality of the dialogue and intercede only to strengthen understanding. They stress communication and use tools that support joint problem solving (Susskind and Cruikshank, 1987, p. 152). In contrast, the neutral third party in an arbitration, the arbitrator, may formulate a solution or even make a decision. It is not joint decisionmaking; the parties are asking the arbitrator to make the decision for them (Susskind and Cruikshank, 1987, p. 178). A public ADR process provides citizens with more power and better access to important decisionmakers and meaningful information. The less influential gain a voice and the more authoritative are constrained, resulting in better communications (Ryan, 1995, p.207). When ADR is successful, the parties have effectively identified common interests

and worked together to reach a solution. In the process, they have clarified their core values, shared information, and built up mutual trust (Bingham, 1986, p.66). The final agreement is acceptable because of the participation of interested individuals and groups.

Traditional citizen participation efforts of federal land management agencies have been criticized for their minimalist efforts at complying with statutory public involvement requirements while continuing to implement predetermined management decisions (Moote and others, 1997). Their public process was delineated in the implementing regulations of such laws as the National Environmental Policy Act, the Federal Land Policy Management Act, and the National Forest Management Act. These laws call for public involvement to be initiated at the start of the planning process, during a “scoping” period. The public is contacted through mailings or public hearings and asked to aid in the identification of issues. Following scoping, the public is not involved again until after plans are developed, baseline environmental studies completed, alternatives developed, and a preferred alternative selected. After a draft plan is completed, the public has a short period of time in which to comment. The agency then considers the comments, responds to them in some manner, makes its final decision, and releases its final plan. At that point, citizens are limited to formal appeals and litigation, and then only if they have participated in the previous review processes (Moote and McClaran, 1997). With environmental conflicts characterized by multiple issues and parties, unequal power among disputing parties, inter-organizational conflict, and technical and scientific complexity and uncertainty, this process does fairly little to make the public a part of the process (O’Leary, 1995, p.19).

The decisions required in making public policy are filled with social value choices, and government agencies should not make them without meaningful public participation

(Moote and others, 1997). Public participation in decisionmaking that consists of commenting on proposed decisions, or is limited to either discrete or one-time events, is a squandering of tremendous opportunity by administrators. The conventional formal hearings and comment periods do not provide an adequate forum for expression of all interests. They favor interest groups over the general public, do not encourage information exchange, and fail to address public concerns (Moote and others, 1997). Yet, all affected parties can be involved in a collective process of thinking and acting (Healey, 1997, p.310). Civic dialogue, where opinions are expressed, debated, and revised, can lead to discovery of common interests and provide communities with the ability to discuss various alternatives (Reich, 1988, 144). Through an unimpeded discussion of ideas, a larger universe of potential solutions to problems can be discovered. Opinions can be examined, assumptions questioned, and common interests determined through constructive public consideration (Reich, 1988). In a decisionmaking process that provides for the participation of all individuals and respects their interests, an active dialogue creates an atmosphere conducive to the understanding of each party's values, interests, and concerns by all of the other participants. A free exchange of information facilitates the perception of, and allows the development of empathy with, the various values or concerns expressed (Moote and McClaran, 1997). This can lead to the revision of each individual's own values or concerns, and possibly the creation of a collaborative definition of the group's goals and objectives (Moote and others, 1997).

Federal agency planning and administration have begun moving away from adversarial processes and toward collaborative decisionmaking (Moote and McClaran, 1997). Collaborative decisionmaking is a method of reaching outcomes that utilizes

concepts of participatory democracy and civic dialogue in cooperatively solving problems. All of the parties with a stake in a problem share in making decisions by constructively exploring their differences (London, 1995, p.1). In collaboration, the parties integrate their resources in coming up with a solution to a problem that is not readily solved individually. This joint decisionmaking approach to resolving problems is characterized by a sharing of power and a collective responsibility for actions and outcomes (Selin and Chavez, 1995). Since the parties to such a process view problems differently, bringing them together makes it possible for joint exploration of those problems, leading to solutions that are beyond individual visions. Through a sharing of responsibility, authority, and accountability, a group solidifies around common goals (London, 1995, p.2). These groups – which can take the form of standing committees, associations, partnerships, forums, boards, councils, roundtables, task forces or panels -- jointly plan, set policy, and manage (Selin and Chavez, 1995). The groups feature sustained dialogue as a means of settling their differences and fostering shared visions of the future (Selin and Chavez, 1995). Collaborative processes build community and understanding, enabling citizens to accept administrative decisions; however, they require administrators to relinquish some power and share decisionmaking authority with the participants (Moote and McClaran, 1997). Sharing responsibility for problems requires those with power to use it as a means of furthering collective action instead of a means for gain (Pasquero, 1991).

Dispute resolution techniques are applicable only after these problems have arisen, and, as the name implies, its applications are limited to disputes. Collaboration involves independent stakeholders in a process that addresses their differences and encourages joint ownership and collective responsibility for decisions (Selin and others, 1997). It is

established on the belief that the “one party wins and one party loses” litigation scenario is not productive of effective, long-term solutions (London, 1995, p.1). Discussions, partnerships, and unstructured meetings are techniques that support mutual understanding. Information and power is shared, and the group takes collective responsibility for actions, outcomes, and decisions (Selin and Chavez, 1995). Relationships develop over time as parties continue to meet and interact. Each time they meet, they acknowledge their differences and show a growing acceptance of their mutual interests and goals (London, 1995, p.5). Issues get defined in terms that require joint problem solving through a consideration of good science, good laws, good economics, and good communities (Daniels and Walker, 1996). Problems are resolved by the sharing of information and power (Pasquero, 1991). Social and community values are highlighted (O’Leary, 1995, p.29). In some situations, information sharing and the forming of partnerships, networks, and trust-building (the development of social capital), may be more important than reaching a solution to the particular problem currently at hand.

Jurgen Habermas has postulated that when a collective course of action is taken, individuals can put forth proposals that are critiqued in a public dialogue concerned with the possibilities of action -- interacting, not arguing -- with the better assertion alone carrying the day. This discourse enables people to put information together in coherent stories and examine representations, claims, and beliefs (Forester, 1993, p.160). Through communicative action, this process creates political legitimacy by building consensus and mutual understanding (Forester, 1993, p.56, 58). Without such a dialogue, those in power can make unsupported claims about factual conditions and remove such assertions from criticism through sanctions, exclusion, ostracization, or threats (Forester, 1993, p.150). A

collaborative dialogue supports learning and understanding in a personal manner that speeches and hearings are incapable of accomplishing (Daniels and Walker, 1996). Opinions are examined, assumptions questioned, and common interests determined through constructive public consideration (Reich, 1988). An active dialogue that respects the interests of all individuals and groups and provides for their participation in a planning or decisionmaking process creates an atmosphere conducive to the understanding of each party's values, interests, and concerns by all of the other participants. A free exchange of information facilitates the perception of, and allows the development of empathy with, the various values and interests expressed (Moote and McClaran, 1997). This can lead to the revision of the participant's own values and interests, which makes it possible for a group to create a collaborative definition of their goals and objectives (Moote and others, 1997).

Collaboration supports a constructive discourse that promotes the discussion of ideas (Daniels and Walker, 1996). This social learning is critical to the public participation process. It is the manner by which participants are able to comprehend the extent of all the participants' values and how those values both conflict with and complement their own (Daniels and Walker, 1996). Discovering these deeply seated values creates greater possibilities for problem solving as a result of greater understanding (Daniels and Walker, 1996). The idea is not to eliminate conflict, but rather to encourage learning and create problem-solving opportunities (Daniels and Walker, 1996).

Collaboration is not the ultimate solution to decisionmaking. Where parties have a long adversarial history and the conflict is rooted in basic ideological differences, they may never be able to reach consensus on any issue. Differences in power, as when one side has the ability to pre-empt the opposition by taking some unilateral action, or a perception by

one party that another participating entity does not have a legitimate claim in the proceedings, also works against collaboration (Selin and Chavez, 1995). When a strong economic or political organization controls how the issues are constructed and how debates are conducted, conflict is inevitable (Healey, 1997). The culture of government agencies hinders collaborative processes, as does the centralized, rational, comprehensive planning under which most agencies operate. Further, nongovernmental organizations may look at shared responsibility as a dilution of power, especially when the alternative of litigation can be used to bring high visibility to their position.

### **2.3 Collaborative Environmental Decisionmaking**

Environmental policy and planning efforts often address the regulation of private property. They attempt to prescribe what property owners can and cannot do with their personal possessions, which many see as an affront to their basic rights as citizens (Cahn, 1995, p.8). The power struggle between public and private rights creates a particularly intense debate (Forester, 1993, p.146). Since the protection of such rights is one of the foundations upon which the United States was built, any challenge to those rights is bound to be intensely controversial (Cahn, 1995, p.14). Yet, creative approaches to environmental problems can result from a collective course of action reached by individuals putting forth proposals that are critiqued in a public dialogue where civic dialogue and local knowledge are fostered (Daniels and Walker, 1996; Forester, 1993, p.56, 58). For this to occur, forums must exist that permit diverse points of view to be aired (Healey, 1997). In these forums, discussions, collaborative discourse, partnerships, and open meetings can occur that support mutual understanding and achieve workable solutions (Daniels and Walker,

1996). Quality of life, the natural environment, and the economic health of local places depend on local capacities for managing these conflicts (Healey, 1997, p.199).

Collaborative *environmental* decisionmaking evolved from environmental dispute resolution (EDR). The theory supporting EDR was based on the premise that if parties meet face-to-face, they might reach solutions acceptable to all sides without having to result to litigation – emphasizing that enduring solutions are based on interests rather than positions. EDR was designed to use process to distinguish the interests of the participants (O’ Leary, 1995, p.23). It promotes reconciliation, settlement, compromise, and understanding (Bingham, 1986, p.5). EDR relies on participant knowledge and experience, and involves consensus building, joint problem solving, and negotiation. However, it is still an evidence-based activity that occurs after the existence of a controversy or conflict (O’ Leary, 1995, p.17). It does not involve parties in the initial planning and decisionmaking processes. The most controversial environmental conflicts have fundamental moral issues at their heart, and these core conflicts are concealed by “confused interests, misunderstandings, disagreements over technical facts, questions of procedural fairness, escalation, and polarization” (Burgess and Burgess, 1995, p.107).

Currently, environmental decisionmaking is at a turning point. As citizen groups increasingly demand a right to participate in management decisions and policy determinations, federal land management agencies have begun patterning public involvement after participatory democracy theories (Selin and others, 1997). As a result, public involvement is evolving into public collaboration (Moote and others, 1997). Some government agencies are beginning to use holistic, and more complex, approaches (Daniels and Walker, 1996). They are beginning to realize that no single party, agency,

organization, or discipline can completely understand a given situation (Daniels and Walker, 1996). Collaborative environmental decisionmaking is increasing as a means of planning and management within national forests. The U.S. Forest Service is beginning to regard collaborative approaches as a feasible way of influencing the direction of natural resource policy. This form of decisionmaking is being used not only to resolve disputes and but also to promote shared visions of the future (Selin and others, 1997).

Collaborative environmental decisionmaking is an adaptive, iterative and open process that uses public participation and scientific information to reach objectives. Public participation is at its heart. It requires that all interested parties -- individuals, groups, and formal organizations that have a perceived interest or impact on a particular resource -- are identified and given the opportunity to participate in the decisionmaking process (Bauer and Randolph, 1999).

#### **2.4 Science, Economics, and Values**

In the 16th Century, Francis Bacon, Galileo Galilei, and Johannes Kepler began the development of a system of devising, selecting, and effecting techniques to reach an understanding of natural phenomena through reasoned deliberation. Rene Descartes then systematized a methodology that involved observation and analysis -- breaking an object down into its component parts to determine how it works (Forester, 1993, p. 21). This systematic investigation, eventually characterized as the scientific method, made it possible to explain the universe by examining and quantifying observed patterns in nature -- patterns that were united into mathematical generalizations, or laws (Chase, 1995, p.56). This process references objective standards that can be accepted, applied, and replicated by others.

Much of the value system of modern Western society is based upon the works of these philosophers and scientists of the Enlightenment. However, over the last three centuries, this instrumental rationality and objectivity may have negatively affected some of the more intrinsically significant aspects of human society (Dryzek, 1990). Hierarchical, patriarchal, and authoritarian views, based on Enlightenment thinking and labeled as “modernism,” have been linked to current environmental problems (Zimmerman, 1994). These views may have given rise to the Western utilitarian regard for the environment as a mere physical occurrence, a source of resources to be exploited, and existing solely to serve human purposes (Kellert, 1995, p. 105). The separation of subject from object in the seventeenth century led to the belief that a person could utilize nature without being personally affected by that action. This created the Baconian-based notion that human domination of the world could occur without consequences to humanity (Hayles, 1991, p.56). Ultimately, this has evolved to the point where financial interests have a privileged position in Western society through control of resources and power, backed by government support (Dryzek, 1997).

Modernism’s relegation of values, interests, and meanings into a compartment separate from facts and observations has contributed to the potential failure to incorporate values into decisionmaking (Forester, 1993, p. 21; Chase, 1995, p.199). Cartesian rationalism works on conventional problems, but its exclusion of values may make it less appropriate in addressing the complex interactions that occur when social and environmental systems collide (Forester, 1993, p. 21). While scientific methodology provides a means of analyzing perceptive concerns about environmental problems, it cannot give any direction to moral behavior, and it may artificially alienate humans from

nature (Zimmerman, 1994, p.122; Chase, 1995, p.199). As Lewis Mumford recognized, the application of science is not capable of addressing the human exploitation of nature. He felt that scientific decisions had to be weighted by cultural criticism (Luccarelli, 1995, p.33). Thus, the scientific model may be challenged on the basis that knowledge can be recognized and gained from sources other than scientific experts (Innes, 1990, p. 4). Further, abstract, scientific knowledge from those with little direct experience does not have to take precedence over the personal experiences of individuals (Gottlieb, 1993). This affords an avenue to contest the over-generalizations of government experts.

Capitalism, the current basis of Western culture, involves the maximization of consumption of material objects. Consumption and growth are the fuels of capitalism; yet, continued consumption at increasing levels is impossible in a finite world (Dobson, 1995, p.17). Basic economic theory fails to capture environmental harm and social costs, placing them outside the cost accounting mechanism of modern industrialism (Dryzek, 1990). This allows overuse of finite natural resources and the degradation of the environment (Cahn, 1995, p.1). Industrial interests are able to injure the environment without paying for the damage to the public “commons.” The failure of these interests to include the costs of such damage in their profit and loss calculations is a major problem in applying economic theory to environmental decisions. Still, when confronted with a difficult choice, decisionmakers usually rely on the measuring capabilities of economics and relegate moral or aesthetic values to some subordinate level of consideration, if given consideration at all (More et al., 1996). Capitalism focuses on the quantification of resources and usually ignores the noneconomic values the environment provides humanity (Norberg-Hodge and Goering, 1995). Placing humanity’s relationship with nature on a basis of economic self-interest

results in a disregard for much of the value of the natural community. So, economics cannot be used as the sole determination of land use (Leopold, 1949), and market forces cannot be relied upon to demonstrate the environment's most highly valued use or to reveal the correct price of its social value (Freeman, 1993). Ecology and economics must be combined into a sustainable system through an unprecedented change in the perspective of humanity -- a change in normative and ethical values (Burgenmeier, 1994).

Values can be defined as criteria by which an object, person, or situation is characterized, as opposed to a definitive, factual rendering of that object, person, or situation (More et al., 1996). An item, entity, or event may have a value or characteristic, or an individual may hold a value or attitude toward something. In one sense, values resemble preferences or desires and are related to feelings and emotions (Barbour, 1980). In another sense, they are properties. They act as standards by which people make judgments or delineate relationships between things and can be either causes or results of social events. They can be used in the sense of a normative determination of "what should be," as opposed to a technical solution that requires utilizing scientific methodology to determine "what is" (DeSario and Langton, 1987). These normative determinations are derived from a set of principles or actions that serve as guidelines for the acceptable behavior of a group, where all people are recognized as capable and qualified to state their normative preferences. They are based on what a group determines is "right" or "proper" (Merriam-Webster, 1969). Thus, these values are a reflection of social attributes and characteristics and cannot be ascertained through empirical investigation or rational deduction (DeSario and Langton, 1987). Value-laden assumptions appear the moment one person initiates communication with another, and controversies often arise when people

place different values on the same objects, ideas, concepts, or other matters (Susskind and Cruikshank, 1987). Consider that each individual has a unique set of experiences that connect him or her to the world. In moving from the point of view of one person to another, the focus of that connection changes and creates a change in values (Hayles, 1991, p.56). Because perceptions are a function of culture, different cultures can have radically different value systems.

While values are subjective and indicate relationships, facts are considered objective references that are independent of the observer. Science attempts to describe facts and relationships objectively through empirical methodology. Science is a process of evaluating feasibility, expected impacts, and the means used to achieve goals (Brown, 1993). Yet, while rarely acknowledged, there is a reciprocal relationship between science and cultural values -- each has influenced the development of the other (Barbour, 1980). Science is susceptible to trends, influences, desires, and ambitions. A scientific choice requires value determinations, as does any action expressing a preference, but these determinations are seldom identified in support of decisions or policy analyses (Brown, 1993). Science can test competing representations, but it cannot create those representations in the first place or expand on them so that other potential alternatives can be examined (Hayles, 1991, p. 59). Whether to use a certain technology in the first place, and then how to employ it, are value issues (DeSario and Langton, 1987, p.8). The Cartesian separation of values from facts stemming from the Enlightenment has led to the belief that scientific facts are independent of the scientist's actions, and thus independent of value. Yet, facts are based on human perceptions, perceptions that are shaped by existing personal values and cannot be separated from them (Westra, 1994). Thus, the

underlying paradigm of scientific research is based on human perceptions; it is not value free (Capra, 1996). Science and technology cannot solve social problems by themselves, and, in fact, can contribute to them (DeSario and Langton, 1987, p.7). Scientific information has been exploited by industry, military and other elites, undermining any claims of objectivity and neutrality and reinforcing the belief that science has become a political tool. When knowledge is put to political use, as when findings are selected to support positions already held, scientists are seen as catering to special interests and as experts that have been bought by the highest bidder (Innes, 1990, p.12; DeSario and Langton, 1987, p.206).

Science emphasizes physical and mechanical functioning by looking primarily at nature's structures and processes below the level of whole systems. This perspective ends up placing more weight on components and elements; it ignores relationships. A propensity for analysis alone can result in the loss of personal contact with the entire living environment (Kellert, 1996, p. 13). When concepts such as the value of wildlife are put up against economic numbers, policy invariably supports commodity production and marketplace objectives. Empiricism is used to justify decisions. Yet, people perceive problems in different ways, and how they are understood determines their potential solution (Innes, 1990, p.55). While the importance of science cannot be disregarded, the fate of the environment may rest on the knowledge, values, and beliefs of humanity (Kellert, 1996, p.177). Thus, facts alone cannot be determinate of a course of action; the decisionmaking process must also be guided by values (More et al, 1996). When environmental problems are translated into scientific language and methodology, a value determination is often omitted because, as Babbie (1995, 17) states, "Science cannot settle debates on value."

Yet, information on values is obtainable through surveys, interviews, observations, and other so-called qualitative study methodologies (Barbour, 1980). Scientific information may provide useful guidance for deciding value questions; however, it is rarely the sole determinant. Value choices are at the core of policy determinations. Decisionmakers need to understand that not only are values a part of science, but that problems are as much value-based as fact-based (More et al., 1996).

While the Earth's capacity to provide for growth is finite, neither the state nor the market are providing any long-term solutions for a worsening environmental crisis (Dryzek, 1990, p.78). Capitalism's never-ending drive for increased productivity and profit through economic production and distribution has resulted in overuse of finite natural resources and the degradation of the environment (Cahn, 1995, p.1). The environmental crisis may be the result of the many negative actions coming from the inappropriate values underlying an industrial-based state (Rainbow, 1993, p. xi).

Public policies and their consequences should be considered in light of the effects humans have on the environment, a line of thought reflected in the more poetic, and more ignored, language of the National Environmental Policy Act.

Some of the economic or political reasons behind a decision are easily disguised by scientific data (Brown, 1993). Isolating disputed facts and then presenting economic and technical solutions is a means of gaining popular support for an environmentally poor decision (Brown, 1993). Decisionmakers need to realize that economic and science-based solutions need balance, and that value analysis is essential to building effective coalitions (More et al., 1996; Caldwell and Shrader-Frechette, 1993). If environmental policy addresses not only economics and other human affairs, but also the health and welfare of

the environment, it may then meet the needs of both society and nature (Cahn, 1995). As the President's Council on Sustainable Development (1996) has noted, science, economics, and societal values need to be considered when making decisions.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Determining the Elements of Collaboration

This work began with an attempt to define the elements of collaboration by examining a number of works that address the collaborative process. After I determined the most common features of collaborative environmental decisionmaking, I refined them into a few basic elements by analyzing actual situations where affected parties addressed environmental issues in open discussions. These elements include the involvement of all affected parties, open discussions, the sharing of information, joint decisionmaking, joint responsibility, and the sharing of power.

I used Yaffee's (1996) book, Ecosystem Management in the United States, and the U.S. Environmental Protection Agency's (EPA) (1995) on-line inventory of sites where ecosystem management is occurring to identify instances where the public was included in management processes. I examined newspapers, magazines, and professional journals for descriptions of environmental decisionmaking or management made in terms of citizen participation. When I found an example that reflected an attempt at public involvement in management or decisionmaking, I recorded basic information about the project -- participants, issues, approaches to problem solving, and solutions. Then, for each of the examples located, I identified whether or not there was evidence for the occurrence of any or all of the previously identified elements of collaboration. I then related the presence of these attributes to the degree to which they were shared in an attempt to gain insight into the relative importance of each feature or element. I illustrated relationships among the

elements by developing branching diagrams that indicated the number of examples that both exhibited a particular element and shared elements with other examples.

For each of the examples, I determined whether a particular element did or did not occur. Then, after going through each of the elements and making a “yes or no” determination at each step, I ended up with a diagram that enabled me to move back and forth among the elements. I could then determine the degree of shared combinations of elements. These diagrams provided a visual picture as to which elements were more important, which may not be that relevant to the decisionmaking process, and which combinations occurred in greater or lesser frequency.

Finally, to obtain an idea as to whether the examples grouped around certain combinations of elements, I developed a dichotomous classification system. This enabled me to determine the number of examples that exhibited similar elements. The result was a grouping of examples under the different combinations of elements.

### **3.2 Case Studies**

Case studies are used when “how” and “why” questions provide answers to the research questions and the researcher is not in a position to control the events (Yin, 1994, p.1). Case studies are examinations of the characteristics and intricacies of an event that are made in an effort to understand its relationships and development (Stake, 1995, p. xi). In a small number of case study analyses of collaborative environmental decisionmaking, investigators have examined documents, surveyed participants, and interviewed key participants. I used these same techniques in this study to explore different areas and seek answers to questions that differ from those in previous studies.

I began by looking for cases that, at a minimum, showed evidence of a group

decisionmaking process within a forum that encouraged discussion. As indicated by earlier research, many such groups exist. I used geographic proximity to narrow case selection from a long list of candidates. To provide a similar basis for comparison purposes while still enabling differences to be described and analyzed, I sought cases where groups of affected parties assembled due to a concern over water quality issues within the Chesapeake Bay watershed. Once I located a process that satisfied these criteria, I contacted the group and requested all available documents, reports, pamphlets, letters, or similar materials about the group and its activities. I examined the documents to determine whether they described processes that included the elements of collaborative environmental decisionmaking. This approach eliminated some potential case studies and uncovered those that appeared to use collaboration. I found six watershed groups, ranging from a multi-state, regional effort to a metropolitan area subwatershed. These organizations were:

- The Chesapeake Bay Program Community Watershed Initiative Workgroup;
- The Rappahannock River Watershed Planning Group;
- The York Watershed Council;
- The Friends of the North Fork of the Shenandoah River;
- The York River Tributary Strategy Team; and
- The Elizabeth River Project Watershed Action Team.

I eliminated the Rappahannock River Watershed Planning Group from consideration when documentation revealed that it was not a decisionmaking body and existed primarily to produce a descriptive watershed plan. While the York Watershed Council and Friends of the North Fork of the Shenandoah River were grassroots organizations that participated in decisionmaking processes, I excluded them because they

were also not in and of themselves environmental decisionmaking bodies. A two-year-old document concerning the York River Tributary Strategy Team called for public participation and citizen input; however, further inquiry indicated that the group did not progress to the point of decisionmaking.

Materials provided by the Chesapeake Bay Program Community Watershed Initiative Workgroup and the Elizabeth River Project Watershed Action Team demonstrated that these groups were involved in decisionmaking processes where affected parties took part in open discussions. I then further evaluated the documents produced by the Chesapeake Bay Program's Community Watershed Initiative and the Elizabeth River Project's Watershed Action Team to determine whether the elements of collaborative decisionmaking, as identified by the literature search, were present in these case studies.

### **3.3 Participant surveys**

Survey research enables the direct collection from individuals of not only facts, but also perceptions, opinions, and attitudes (Manheim and Rich, 1995). I sent a questionnaire to all members of the selected case studies so that all participants in these processes had an opportunity to provide their opinions. I utilized surveys to obtain information directly from participants about the elements of collaboration and their effects on participants' positions, the ability to reach consensus, and the development of solutions (Appendix One).

I divided the questionnaire into four basic parts. The first part addressed the respondents' knowledge of, and experience with, the particular group with which they were affiliated. Within this part, the respondents were asked to:

- indicate whether they represented a federal, state, or local government entity, a nongovernmental organization, some other group, or were acting as a private

citizen;

- rank what they thought were the three most important issues at the start of their participation in the process;
- signify what groups they perceived were participating; and
- indicate how many sessions they she attended.

The second part of the questionnaire dealt with the discussions that occurred when the groups met. Using a five-degree Likert scale, I asked respondents to indicate whether they strongly disagreed, disagreed, were unsure, agreed, or strongly agreed as to whether:

- the participant had an opportunity to express concerns;
- those concerns were discussed by the group; and
- whether information was shared.

The third part addressed decisionmaking. I asked respondents whether:

- one person was responsible for decisionmaking;
- some people had more influence than others; final decisions were made by a majority; and
- decisions were reached by consensus.

They were also asked to indicate whether:

- the group developed solutions;
- all participants were committed to the process;
- alternatives were developed; and
- the process was a success.

I then asked the respondents to rank what they thought were the three most important issues at the end of participation in the process.

The final part of the questionnaire addressed the composition of the group. I asked the respondents to indicate their sex, age group, race, education, income group, and community population size.

### **3.4 Interviews with participants in the case studies**

To elaborate on the responses and to determine the “how” and “why” behind the answers to the survey questions, I conducted interviews of individuals. By asking for facts, opinions, and insights, interviews can be the most important source of information for a researcher. The investigator can glean a tremendous amount of information about the case from individuals who actually participated in events (Yin, 1994, p.84). I used interviews to corroborate and augment the data obtained from the documents and surveys.

I interviewed participants about the context, structure, participation, procedure, and results of the group meetings. These interviews were quasi-structured in that informants were asked similar questions, yet they were permitted to provide any information they felt was relevant. Lines of inquiry were followed from the volunteered information. I asked personal, in-depth questions of the participants about their thoughts on the process, its effectiveness, and the roles of the different parties.

I chose informants in two ways. Documentation on the group often revealed that certain people were key participants, and I asked several of these individuals if they would be willing to let me interview them. The other means was through the survey questionnaire. The questionnaire included a provision for respondents to indicate if they were interested in being personally interviewed. Based on the names obtained from these two sources, I chose informants from among people representing the various interest groups. I determined the number of interviews to take by simply making sure that those

interviewed came from the represented groups or were among those who identified themselves as individual citizens.