Natural Resources Dispute Resolution: An Overview

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INTRODUCTION

The past two decades have been marked by numerous disputes regarding the development and use of natural resources. Interest in finding effective means to resolve these disputes has prompted consideration of a variety of approaches in addition to traditional litigation. Environmental disputes have been especially prominent in the present wave of interest in "alternative dispute resolution."¹

In many respects, alternative dispute resolution (ADR) can be viewed as a reform movement.² Dissatisfaction with the expense of litigation, its complexity and delays, periodically has encouraged the search for viable alternatives.³ Considerable attention now is being focused on voluntary approaches in which the parties themselves are directly involved in seeking resolution. Often, the approach taken is itself nothing new; what is new is the attempt to use such an approach in situations where litigation has been the conventional method. In addition, there have been some innovative developments which have added to the options available for dispute resolution.⁴

This issue of the Natural Resources Journal features articles relating to emerging alternative approaches to addressing natural resources-based disputes. This introductory article considers the sources and types of conflict in natural resources, the general approaches to dispute resolution, and considerations in determining which approach to take.

¹ An excellent body of literature is developing in support of this field. Prominent recent examples are S. Goldberg, E. Green, & F. Sander, Dispute Resolution (1985) [hereinafter Goldberg] and L. Bacow & M. Wheeler, Environmental Dispute Resolution (1984). See also, L. Kanowitz, Alternative Dispute Resolution (1985).

² A good example of the literature critical of the traditional legal system is provided by J. Auerbach, Justice Without Law? (1983).

³ Earlier in this century Roscoe Pound led the debate. See, e.g., Pound, "The Limits of Effective Legal Action," 3 A.B.A. J. 55 (1917). A number of enduring changes in the legal system resulted from the reform efforts at that time: specialized courts to deal with small claims, domestic relations and juveniles; public defenders and legal aid societies; administrative agencies with regulatory authority; and formalized arbitration procedures. J. Auerbach, supra note 2, at 95-97.

⁴ A sense of the range of options to traditional adjudication can be obtained by looking at lists such as that found in Marks, Johnson & Szanton, Dispute Resolution in America: Processes in Evolution, National Institute for Dispute Resolution 42-50 (1984), or in S. Goldberg, supra note 1, at 8-9.
The article by Susan Carpenter and W.J.D. Kennedy, *The Denver Metropolitan Water Roundtable: A Case Study in Reaching Agreements*, provides a thorough recounting of an innovative effort to address water problems in Colorado. John Folk-Williams, *The Use of Negotiated Agreements to Resolve Water Disputes Involving Indian Rights*, provides a discussion of the efforts being made to settle issues related to Indian reserved water rights. Thomas Berger’s article, *Conflict in Alaska*, discusses his efforts at anticipatory conflict resolution in the context of the Alaska Native Claims Settlement Act. Lloyd Burton questions the appropriateness and mechanisms of negotiation with regard to federal policy-making in his article, *Negotiating the Cleanup of Toxic Groundwater Contamination: Strategy and Legitimacy*. Finally, An Painter considers *The Future of Environmental Dispute Resolution*.

**SOURCES AND TYPES OF CONFLICT IN NATURAL RESOURCES**

**Sources**

The development and use of natural resources are fundamental to all economies. As a general matter it may be presumed that a society wishes to develop its resources in a manner that maximizes its welfare.5 At the same time, individual objectives and preferences with regard to natural resources are certain to vary widely.

Reasonable people may well have different views of the future. These divergent views are likely to lead to differing time preferences for types and amounts of investments.6 For example, estimates of the continued rate of growth for electricity demand were actively debated during the 1970s. Those who believed that historic growth rates would continue favored major investments to expand basic generating capacity. Others argued that increasing costs would dampen demand and that a combination of economically efficient conservation measures and increased supplies from nonconventional sources such as cogeneration would substantially reduce the need for such additional generating capacity. A somewhat analogous debate is underway regarding whether additional water for western cities can best be supplied through construction of large storage reservoirs or through better management and use of existing supplies.

Opportunity costs and the relative importance attached to different possible resource outputs will influence choices regarding resource use. Public lands generally are to be managed for “multiple use.”7 Certain

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types of uses, such as mining and wilderness, are largely incompatible. Other uses such as mineral exploration and protection of habitat for endangered species may generate conflicts. Difficult decisions must be made in choosing among possible uses of public land resources.

Resource issues often involve highly complex technical matters. Understandably, factual interpretations in such matters may vary among the interested parties, thereby leading to conflict. For example, transfer of a water right under the appropriation doctrine is contingent upon a showing of no injury to other appropriators on the stream. Downstream appropriators may well have a different view of the consequences of a proposed transfer than does the person making the transfer. In such situations it is essential to have a forum where such factual conflicts can be resolved.

A more difficult problem is presented when the conflict centers around things that are unknown and that may not be determinable at that time. Environmental issues are filled with such uncertainties. Does exposure to low levels of radiation pose a danger to human health? Will construction of a dam 250 miles upstream from a stopover point for migrating whooping cranes endanger the continued existence of that species? Factual analysis is a necessary but insufficient basis for resolving conflicts in such situations.

In the context of environmental disputes it has been pointed out that "people often take opposing positions because they have different stakes in the outcome." An action that benefits some may harm others. For example, a sand and gravel operation benefits the landowner, the operator, and the users of the materials; but the noise, dust, traffic and other undesirable effects may harm adjacent property owners. A waste disposal site benefits those generating the waste, but is likely to be resisted by neighboring property owners. Mitigation or compensation measures provide one means of addressing such situations.

Values are often at issue in natural resources conflicts. Air, water, and land are such a fundamental part of human existence that their use is a matter of special concern. Reasonable people may disagree as to what is the "right" use of these resources. Value-centered conflicts are

11. See, e.g., American Mining Congress v. Thomas, 772 F.2d 617 (10th Cir. 1985).
especially difficult to resolve and perhaps are best addressed through the political process.

Types

Identifying the parties to a dispute provides one means of distinguishing types of disputes. In the natural resources area disputes are less likely to involve two private parties and more likely to involve a number of parties, including the government.15 The issues are less likely to be purely local and more likely to be regional and even national. Controversy is likely to focus on some action or activity in relation to policies established in laws and regulations.

Certainly there are disputes in the natural resources area strictly involving private parties. Typically these involve disputes regarding business arrangements such as an oil and gas lease. Under the 1872 Mining Law there have been some celebrated disputes between conflicting mining claimants on the public lands.16

A second type of natural resources dispute involves a private entity and the government. In one situation the dispute may arise because the government owns the resource and the private entity seeks or holds a development right. On the other hand the dispute may arise from the role of government as regulator. In either case the private entity must follow the procedures established by the government agency in dealing with that agency regarding a dispute.17

A third type of natural resources dispute involves multiple parties, often including the government. Typically the dispute is triggered by a proposed private action. There may be objections to this action by one or more parties. In many cases the dispute focuses on necessary government permits or other forms of government control. Alternatively, government may itself be the proponent of the action or activity raising the dispute as, for example, when it builds highways or water storage projects or when it implements controversial, complex, or unclear policies.18

A study that reviewed environmental conflicts submitted to some vol-

15. G. Bingham, Resolving Environmental Disputes: A Decade of Experience 45 (1986) [hereinafter Bingham]. (The author reports that in 115 environmental disputes examined, government entities were parties in 82% of the cases.)


17. See Dealing with Agencies, 1 Nat. Res. & Envir. (1985) (Issue containing 10 articles on various aspects of dispute resolution with agencies).

18. Environmental legislation has generally followed the pattern of establishing general standards of environmental control while leaving the implementing agency the task of devising the specific means of achieving these standards. The EPA especially has made some efforts to use negotiation as a means of devising regulations. See Harter, Negotiating Regulations: A Cure for Malaise, 71 Geo. L.J. 1 (1982).
untary dispute resolution process between 1974 and 1984 divided the issues in these cases into six categories. The majority of these disputes involved land-use problems of various kinds. Other categories, in descending order of the number of cases, were natural resource management and use of public lands, water resources, energy, air quality, and toxics. Table 1 provides a more detailed presentation of the types and numbers of disputes. An interesting conclusion of this study is that the type of issue is not a significant factor in whether voluntary dispute resolution is likely to be successful.

GENERAL APPROACHES TO DISPUTE RESOLUTION

Susskind has distinguished four different “strands” in the broad field of dispute resolution: alternative ways of dealing with civil disputes that ordinarily would have been litigated; methods for addressing interpersonal and intra-organizational conflicts that ordinarily would not be litigated; methods for addressing international conflict in which litigation is not really an option; and supplements to the legislative, administrative, and judicial processes for resolving differences over allocation of public resources or setting of public policy. The nature of the conflicts in these different strands tends to be quite different. Accordingly the choice of conflict resolution methods or approaches is likely to vary as well.

Allusion has already been made to the wide variety of approaches possible to resolve disputes. Disagreement between two individuals could be settled by a throw of the dice. In more complicated matters they may choose to seek resolution through a process of negotiation where the settlement represents mutual agreement. In attempting to reach such a settlement it may be useful to involve a neutral third party to act as a mediator. In some situations where a final resolution is considered essential by both parties the matter may be submitted to outside arbitrators whose decision will be binding. In each case the parties have voluntarily entered into the process.

In addition to these voluntary, largely informal methods of dispute resolution, societies create more formal means of social ordering. Formal adjudication involves the use of judges as decision makers. By bring-

20. Id.
21. Id. at 117.
23. Fuller, The Forms and Limits of Adjudication, 92 HARV. L. REV. 353 (1978). Fuller defines social ordering as “a way in which the relations of men to one another are governed and regulated.” Id. at 357. He distinguishes three general forms: contract, elections, and adjudication. In his view, the essential difference among them “lies in the manner in which the affected parties participate in the decision reached.” Id. at 363.
### TABLE 1
Distribution of Environmental Dispute Resolution Cases by Primary Issue(s)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Site-specific</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Land Use (total)</strong></td>
<td>(70)</td>
<td>(16)</td>
</tr>
<tr>
<td>1. housing and neighborhood impacts</td>
<td>18</td>
<td>—</td>
</tr>
<tr>
<td>2. parks, recreation, trails, open space</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>3. annexation</td>
<td>9</td>
<td>—</td>
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<tr>
<td>4. sewage treatment and sludge disposal</td>
<td>9</td>
<td>—</td>
</tr>
<tr>
<td>5. commercial development, impacts on commercial areas</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>and larger community development planning issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. port development and dredging</td>
<td>5</td>
<td>—</td>
</tr>
<tr>
<td>7. highway and mass transit</td>
<td>5</td>
<td>—</td>
</tr>
<tr>
<td>8. noise (airports and raceways)</td>
<td>4</td>
<td>—</td>
</tr>
<tr>
<td>9. solid waste and landfills</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>10. agricultural land preservation, growth control, and</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>other long-range regional planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. historic preservation</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>12. wetlands protection (excluding coastal wetlands)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>13. sand and gravel operation</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>14. division of private property</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>15. sale of publicly-owned land</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td>16. hazardous waste siting</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>17. industrial siting</td>
<td>1</td>
<td>—</td>
</tr>
</tbody>
</table>

| **B. Natural resource management and use of public lands (total)**  | (29)         | (4)    |
| 1. fishing rights and resource management                          | 7            | —      |
| 2. coastal marine resources, coastal wetlands                      | 6            | —      |
| 3. mining and mine reclamation                                     | 5            | 1      |
| 4. timber management                                               | 3            | 1      |
| 5. white-water recreation                                           | 3            | —      |
| 6. offshore oil and gas exploration (OCS)                          | 3            | —      |
| 7. other public land management issues                             | 3            | 1      |
| 8. wilderness                                                      | 1            | 2      |
| 9. wildlife habitat (excluding coastal wetlands)                   | 1            | —      |
| 10. watershed management                                           | 1            | —      |

| **C. Water resources (total)**                                     | (16)         | (1)    |
| 1. water quality                                                   | 4            | —      |
| 2. water supply                                                    | 5            | 1      |
| 3. flood protection                                                | 4            | —      |
| 4. thermal effects                                                 | 3            | —      |

| **D. Energy (total)**                                              | (10)         | (4)    |
| 1. low-head hydro                                                  | 4            | —      |
| 2. coal conversions                                                | 3            | —      |
| 3. large-scale hydro                                               | 1            | —      |
| 4. geothermal                                                      | 1            | —      |
| 5. nuclear                                                         | 1            | —      |
| 6. other energy policy issues (e.g., alternative energy,           | —            | 4      |
| energy emergency preparedness, regional energy policy)             |              |        |

| **E. Air quality (total)**                                         | (6)          | (7)    |
| 1. odor                                                            | 3            | —      |
ing a lawsuit one party can force another to submit a dispute to resolution according to previously established legal precedents. When required or authorized by statute, certain types of disputed actions may be submitted to administrative hearings by a government agency for an initial determination. General and special elections are another means by which disputed choices may be made.

The following presents a brief overview of the major dispute resolution approaches.

Adjudication—the Traditional Approach

As a general matter disputes arise because someone wants something to happen that isn’t happening, or doesn’t want something to happen that is happening. Under a rule of law the moving party must be able to point either to a legal duty or a legal right that compels the desired result. Such rights and duties may be created legislatively by a political body, administratively by an agency, or judicially (as a matter of common law) by the courts. However established, the judiciary is given the final responsibility for determining the existence of such rights or duties in a specific case and deciding the outcome.

Fuller has spelled out the adjudicatory framework in the following way:

(1) Adjudication is a process of decision that grants to the affected party a form of participation that consists in the opportunity to present proofs and reasoned arguments. (2) The litigant must therefore, if his participation is to be meaningful, assert some principle or principles by which his arguments are sound and his proofs relevant. (3) A naked demand is distinguished from a claim of right by the fact that the latter is a demand supported by a principle; likewise, a mere
expression of displeasure or resentment is distinguished from an accusation by the fact that the latter rests upon some principle. Hence, (4) issues tried before an adjudicator tend to become claims of right or accusations of fault.  

Thus adjudication depends on the existence of a rationally knowable principle the application of which to the situation at hand determines the outcome. Fuller also recognized the “fundamental truth that certain kinds of human relations are not appropriate raw material for a process of decision that is institutionally committed to acting on the basis of reasoned argument.” He uses the illustration of “polycentric” problems—those so complex and “many-centered” as to exceed the ability of a rational, principle-based approach to resolve.

Voluntary—Nonlegal Approaches

Adjudication involves a highly structured process by which one party (the plaintiff) forces another party (the defendant) to submit a dispute to compulsory determination by a neutral judge. Alternatively, disputes may be resolved by means of processes and according to rules created by the disputants. The most familiar methods are negotiation, mediation, and arbitration.

Negotiation almost always accompanies litigation but it may also be undertaken separately. Discussion may be used to obtain agreement or consensus on broad policy questions as well as to reach agreement between private parties. Books are written on how to negotiate and courses on negotiating are taught. Since compulsion is not involved, agreement reached through negotiation should reflect a belief by the parties that they are better off as a result than they believe they would be by pursuing other alternatives.

Mediation introduces an outside neutral into the settlement process to act as a facilitator. Stulberg has provided the following explanation of mediation:

The mediation process can be characterized as follows: it is (1) a non-compulsory procedure in which (2) an impartial, neutral party

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24. Fuller, supra note 23, at 369.
25. Id. at 371.
26. Id. at 394-404. A good example is provided by the complex interactions that make up a market for any good or service. No rational process can unravel all the factors that cause markets to establish prices. Market decisions are polycentric.
27. A well-known example is the coal policy task force. See WHERE WE AGREE: REPORT OF THE NATIONAL COAL POLICY PROJECT (F. Murray, ed. 1978).
29. R. FISHER & W. URY, supra note 28, at 101-111, talk about the concept of the negotiator’s BATNA—the best alternative to a negotiated agreement.
is invited or accepted by (3) parties to a dispute to help them (4) identify issues of mutual concern and (5) design solutions to these issues (6) which are acceptable to the parties.30

As with negotiation the only rules or structure that applies are those imposed by the parties themselves. No objectively definitive norm or principles are assumed to control the outcome. As Fuller suggests, it is the settlement itself that creates the norm.31 And, like negotiation, the settlement requires mutual agreement of the parties.

Since the determinative factor in negotiation and mediation is this agreement to settle, these approaches may be attempted in every dispute. No matter how complicated the issues, presumably, so long as the parties to the dispute are satisfied with the outcome, the reasons for settlement are not really important.32 The burden of rationality is removed.

At the same time, it is evident that for such a voluntary process to work the parties must find it in their interest to make the effort necessary to reach agreement. This suggests that there must be a recognition of interdependence—that the objective of each party can best be met through mutual agreement. Moreover, the parties must see this process as clearly preferable to any alternative. There must be a commitment to the process including the implementation of any agreement that may result from the process.33

32. Of course, this neglects the possibility that the relative bargaining powers of the parties are so unequal that the settlement is, in fact, unfair. See, e.g., Fiss, Against Settlement, 93 YALE L. J. 1073 (1984).
33. Cormick provides a "checklist" for considering whether negotiation or mediation is likely to work:

A. Are all parties represented who have a stake in the outcome of the negotiations? Is any party excluded who could prevent an agreement from being carried out?
B. Have parties reached general agreement on the scope of the issues to be addressed?
C. Are the negotiators for each party able to speak for their constituency? Is there reason to believe that if the negotiators reach an agreement, that agreement will be honored by the groups they represent?
D. Have the immediate parties and the eventual decision makers committed themselves to a good-faith effort to reach consensual agreement?
E. Has a realistic deadline been set for the negotiations?
F. Are there reasonable assurances that affected governmental agencies will cooperate in carrying out an agreement if one is reached?
G. Does the mediator operate from a base that is independent of both the immediate parties and the decision makers with jurisdiction over the dispute?
H. Do you trust the mediator to carry messages when appropriate and to honor confidential remarks?

Arbitration has perhaps more of the qualities of adjudication than of negotiation or mediation. Although the process itself is voluntarily agreed to by the parties, the decision or settlement is made by some third party. Typically, in arbitration proceedings the parties agree in advance that the decision of the arbitrator (often a board or panel) will be binding and final in the same way that a court decision is final. Thus agreement between the parties is limited to a mutual desire to achieve a settlement by means of this mutually arranged process. Unlike adjudication, the parties pick the decisionmaker(s) and set the other rules. Even in arbitration, then, the basis for settlement is mutual agreement between the parties.

A major difference between these voluntary methods is the degree of outside involvement in reaching settlement. Negotiation involves only the parties themselves or their representatives. Mediation adds a third-party process facilitator. Arbitration introduces outside decisionmakers. In any event the parties themselves decide on the process to be undertaken. Each of these approaches offers advantages and disadvantages which may be evaluated by the disputants in deciding how to deal with the dispute.

Some New Approaches—Hybrids and Other Experimentation with Dispute Resolution

Experimentation with dispute resolution processes is producing a rich variety of options. Such increased options make possible choices that may be better suited to the particular type of dispute at issue. In general these new options are developments of existing approaches which may involve combinations of features from more than one of these approaches.

An example of the so-called hybrid processes is referred to as "med-arb." Utilized to settle labor and commercial disputes, med-arb subjects the disputed issues first to mediation and then uses arbitration to settle remaining unresolved issues. Usually, but not always, the mediator becomes the arbitrator.

Mediated negotiation has been used to address disputes involving the public sector. Traditionally, public sector disputes are resolved through administrative, legislative, or judicial means. In many instances, mediated negotiation has been found to be a more effective means of resolving disputes because of the ability to more directly involve those concerned and to tailor a process suited to the problem at hand.

34. L. Kanowitz, supra note 1 (includes extensive materials relating to arbitration).
35. See Goldberg, supra note 1, at 246.
36. See Susskind & Ozawa, Mediated Negotiation in the Public Sector, 27 American Behavioral Scientist 255 (1983). These authors use the term mediated negotiation "to emphasis the presence of a neutral intervenor and to distinguish mediated negotiation from other consensual approaches to dispute resolution that employ the assistance of a third party." Id.
So-called "mini-trials" have been used successfully to resolve a variety of disputes. As used in business disputes, representatives from each party are given a limited period of time in which to present the most important points to senior executives from both parties. Then the executives attempt to reach a negotiated settlement—perhaps with the assistance of a neutral third party.

Still another variation that has received use in recent years is private judging. Here the parties hire a retired judge to hear the case and issue a final opinion. Though in some states the procedure and effect are exactly the same as if the case had gone to normal court, the major advantage is the ability to speed up the hearing and decision time.

The use of an ombudsman to facilitate dispute resolution has gained acceptance in a number of areas. In certain technical and highly important legal issues courts have made use of special masters to prepare preliminary findings based on often lengthy hearings and review of materials. The list of possible options goes on, and is likely to increase as efforts continue to find effective ways to resolve disputes.

**RESOLVING DISPUTES**

It is difficult to talk generally about dispute resolution because there is so much variation among disputes. As discussed, within the natural resources area the sources and types of disputes vary greatly. Consequently this discussion will be limited to some general observations regarding first, problem solving, and then choosing among the options.

**Dispute Resolution as Problem Solving**

Parties to a dispute are seeking to "win"—that is, to achieve a result that accomplishes their most important purposes. Very often when a dispute arises it is centered on things the disputants do not like. In such situations a dispute is effectively just opposition to something. There is likely to be little attention given to alternatives.

Quite possibly, the emphasis in our system on adjudication has encouraged a kind of plaintiff or defendant mentality in which disputes are seen

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38. S. Goldberg, supra note 1, at 12-13.
42. See others described in S. Goldberg, supra note 1, at 280-308.
43. S. Goldberg, supra note 1, at 5, states that 90 to 95% of all cases filed are resolved without trial.
as a win or lose proposition. Indeed, disputants are "adversaries" in litigation and usually communicate only through their attorneys. Nevertheless, the fact that such a high percentage of cases are settled before they get to court demonstrates that even most litigated disputes are resolved without formal adjudication.43

Alternative dispute resolution seeks to shift the perspective of a dispute from negative opposition to more positive problem solving. In many instances, the issues at dispute may be resolvable in a manner producing important benefits for both sides. Recognition at the outset that dispute resolution is essentially problem solving could help to encourage a more creative view of the options available.

Thinking About the Options

As discussed, there are an increasing number of dispute resolution options available. Goldberg, Green and Sander point to several important considerations in choosing among these options: (1) relationship of the disputants; (2) the nature of the dispute; (3) the amount at stake; (4) the importance of speed and cost; and (5) the power relationship between the parties.44

It is more important for disputants in an on-going relationship to maintain constructive communication and jointly resolve disagreements than for those without any long-term connection. Parties with a mutually perceived interdependence such as labor and management recognize the need for finding a resolution that permits their basic relationship to stay intact.

A clear understanding of the nature of the dispute also is important. Purely legal disputes generally are best handled through the adjudication process. Even so, however, it may be that the legal issue is not so novel as to require a court decision but may well be handled through a simpler adjudicatory procedure.45 Disputes centering on nonlegal issues are likely to be better handled through nonadjudicatory options.

The amount at stake is not restricted to monetary concerns but rather focuses on the novelty or complexity of the issues. Preliminary screening may be useful in separating disputes according to the need for procedural and substantive process. As a result, "[t]hose disputes presenting novel or complex issues would be appropriately referred to a dispute resolution forum in which there is ample opportunity for the full presentation of evidence and argument; those presenting simpler or more routine issues would be referred to a more truncated procedure."46

44. S. GOLDBERG, supra note 1, at 10-11.
45. S. GOLDBERG, supra note 1, at 11, cites the difference between a class action lawsuit involving a civil rights issue and a subsequent determination of the damages due individual members of the class.
46. Id.
Dispute resolution options may vary considerably in the time and cost involved. The more control of the process the parties themselves retain the more ability they will have to manage these aspects. Though alternative dispute resolution is often touted as desirable because it is assumed that it will be cheaper and quicker than litigation, it does not appear that this conclusion has been verified through any kind of systematic empirical analysis.47

Parties to a dispute are likely to have substantially different available resources. In some cases this disparity could have an important effect on the outcome. The various dispute resolution options present different opportunities and problems in addressing this concern. For example, one of the attractions of adjudication is the promise that disputes are resolved by an impartial judge according to general rules of law irrespective of the power of the parties involved. On the other hand, the expense of complex litigation may in fact favor the party with the resources available to hire the best lawyers and expert witnesses.

Successful Dispute Resolution

As the dispute resolution field has grown there have been efforts to identify elements in the process essential to its success. For example, Susskind and Weinstein list “nine steps” to resolving environmental disputes.48 Bingham, in her review of environmental disputes, explores the factors apparently most important in determining the success of the resolution effort.49

Voluntary dispute resolution methods such as negotiation and mediation are attractive in certain situations because of the opportunity for the parties themselves to directly shape the outcome. Instead of engaging in unproductive litigation involving surrogate procedural issues,50 attention can be focused on the real problems.

At the same time, the voluntary nature of the process introduces other considerations. Commitment to the process is clearly essential. Success

47. G._pra_BINGHAM, supra note 15, at 141.
48. Susskind & Weinstein, Towards a Theory of Environmental Dispute Resolution, 9 B. C. J. ENVIR. AFF. 311, 336 (1980). The nine steps are: (1) identifying the parties that have a stake in the outcome of the dispute; (2) ensuring that groups or interests that have a stake in the outcome are appropriately represented; (3) narrowing the agenda and confronting fundamentally different values and assumptions; (4) generating a sufficient number of alternatives or options; (5) agreeing on the boundaries and time horizon for analysis; (6) weighting, scaling, and amalgamating judgments about costs and benefits; (7) determining fair compensatory actions; (8) implementing the bargains that are made; and (9) holding the parties to their commitments. A modification producing “eleven elements of environmental mediation” can be found in Cox, Shabman & Blackburn, Development of Procedures for Improved Resolution of Conflicts Related to Interjurisdictional Water Transfer, 145 VIRGINIA WATER RESOURCES RESEARCH CENTER 62 (1985).
of the parties in being able to seek solutions based on finding ways to satisfy each others' most important interests also is essential. To ensure that the agreement sticks it is important to involve those with authority to implement the settlement.

Bingham emphasizes the importance of undertaking an initial assessment of the dispute.\(^{51}\) Dispute assessment is used to introduce the nature of a voluntary process to the parties, to preliminarily identify the key factors in the dispute, to uncover potential obstacles, and to develop a design for the process including ground rules.\(^{52}\) As Bingham states: "The dispute assessment and process design phases of a voluntary dispute resolution effort are closely linked, since agreement on how a dispute resolution process will be conducted frequently is a prerequisite to the decision of each party about whether to participate."\(^{53}\)

**CONCLUSION**

The United States often is characterized as a litigious society.\(^{54}\) On regular occasions the well-known line from Shakespeare's *Henry VI* is repeated: "The first thing we do, let's kill all the lawyers."\(^{55}\) A recent scholarly counterattack (by a lawyer) suggests that the popular view of litigiousness is vastly overstated.\(^{56}\) Nevertheless, there is little doubt that disputes are common and that effective and equitable resolution of these disputes is desirable.

Interest in broadening the approaches available for dispute resolution has produced some important new developments. Negotiation and mediation have been applied successfully in a number of environmental disputes. Improvements in the application of these approaches are being made as experience is gained. The number of professionals available to facilitate voluntary methods of dispute resolution is increasing.\(^{57}\) Innovative new techniques such as mini-trials are gaining increased usage.

As Auerbach has commented:

> The varieties of dispute settlement and the socially sanctioned choices in any culture, communicate the ideals people cherish, their percep-

\(^{51} G.\) Bingham, *supra* note 15, at 93.
\(^{52} Id.* at 92.
\(^{53} Id.*
\(^{56} Galanter, Reading the Landscape of Disputes: What We Know And Don't Know (And Think We Know) About Our Allegedly Contentious and Litigious Society, 31 UCLA L. Rev. 4 (1983).*
\(^{57} For a listing of supporting organizations involved in ADR activities, see Marks, Johnson & Szanton, *supra* note 4, at 69-74. Organizations offering environmental dispute resolution services are listed in Susskind, *Environmental Mediation and the Accountability Problem*, 6 VT. L. Rev. 1, n. 1 (1981).
tions of themselves, and the quality of their relationship with others. . . .
Ultimately the most basic values of society are revealed in its dispute-
settlement procedures. 58

These new developments in dispute resolution enrich the options for
making choices.

58. J. Auerbach, supra note 2, at 3-4.