Research Report

Control, Communication, and Power: A Study of the Use of Alternative Dispute Resolution of Enforcement Actions at the U.S. Environmental Protection Agency

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Two decades after pioneering the use of alternative dispute resolution techniques, practices, and processes, the U.S. Environmental Protection Agency (EPA) has emerged as the leader among federal agencies. As such, the EPA provides a useful setting for testing conventional wisdom and theories about alternative dispute resolution. This essay takes data collected as a part of an assessment of the agency's enforcement ADR program and examines how well it reflects or illuminates current theory and conventional wisdom about conflict resolution. In particular, we examine why parties to a dispute choose ADR, and the key elements needed for the successful resolution of environmental conflicts, including the dynamics between the parties at the table and mediator characteristics.

Conflict and crisis are conditions that have pervaded the work of the U.S. Environmental Protection Agency (EPA) since this federal agency was founded in 1970. Industry's relentless attacks on "command-and-control"

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regulations, environmentalists' stiff opposition to any perceived weakening of standards, and widespread public mistrust are among the factors that bring constant controversy to the agency. Faced with ever-growing balkanization among its constituencies on all fronts, perhaps it was only natural for the EPA to be one of the first federal agencies to embrace dispute resolution as a tool to manage conflict productively. The EPA formally adopted the use of alternative dispute resolution (ADR) as far back as in 1981, after observing its success in several local controversies during the 1970's.

By 1985, EPA's Office of Enforcement had piloted the use of ADR to assist in the resolution of enforcement actions. In 1987, the EPA issued a set of guidelines on the use of alternative dispute resolution in enforcement cases, establishing the review of all enforcement actions for the potential use of ADR processes. Now, two decades after initial discussions concerning the use of alternative dispute resolution, the agency has a track record in applying ADR to a wide range of disputes, especially enforcement actions, and has emerged as the leader among federal agencies. As such, the EPA provides a useful setting for testing conventional wisdom and theories about alternative dispute resolution. This essay takes data collected as a part of an assessment of the agency's enforcement ADR program and examines how well it reflects or illuminates current theory and conventional wisdom about conflict resolution. In particular, we examine theory in the following two areas:

- Why parties to a dispute choose ADR; and,
- Key elements needed for the successful resolution of environmental conflicts, including the dynamics between the parties at the table and mediator characteristics.

This research was carried out from 1998 to 2000, using in-depth telephone interviews, government statistics,[1] and archival records.[2] The four groups examined were:

- potentially responsible parties (PRPs) to primarily Superfund cases (we interviewed a stratified random sample of 25 parties);
- agency enforcement attorneys who had participated in an EPA enforcement ADR process, again primarily in Superfund-related cases (61, or 78 percent were interviewed);
- EPA alternative dispute resolution specialists (18 out of 20, or 90 percent were interviewed); and
- Third-party neutrals used to convene, facilitate, or mediate the cases. (We interviewed 22 for a response rate of 69 percent.)[3]

Detailed information about our methodology is available in O'Leary and Raines (2001).

We surveyed the PRPs and agency enforcement attorneys concerning their direct experiences with particular enforcement cases,[4] while we surveyed the ADR specialists and third-party neutrals about their overall

experiences with the EPA's alternative dispute resolution program as it related to enforcement cases.

At the heart of alternative dispute resolution are face-to-face meetings of parties who have a stake in the outcome of the matter to reach consensus on a solution which best satisfies their interests. Based on the extant literature, O'Leary et al. (1999) have identified five principal elements of alternative dispute resolution as it relates to environmental disputes:

1. the parties agree to participate in the process;
2. the parties or their representatives directly participate;
3. a third-party mediator helps the parties reach agreement, but has no authority to impose a solution;
4. the parties must be able to agree on the outcome; and
5. any participant may withdraw and seek a resolution elsewhere.

The literature is rife with normative pleas to increase the use of environmental dispute resolution. One author, for example, argues that the participation of the lay public and interested stakeholders in the resolution of water conflicts in the western United States is a fundamental tenet of our democratic government (Waller 1995). Other literature focuses on problems that might be more amicably and more efficiently resolved through ADR. For instance, one author argues that the use of alternative dispute resolution techniques could greatly improve the management of Superfund cleanups (Whitman 1993). A study of intergovernmental conflict stemming from state law regulating solid waste in North Carolina concludes that state and local governments may be able to resolve such disputes positively by adopting a problem-solving stance and searching for "win-win" results (Jenks 1994). Finally, the Environmental Protection Agency's Office of Site Remediation writes in one of its publications that there are several benefits of ADR in its environmental enforcement actions: lower transaction costs; a focus on problem solving (as opposed to positioning); the generation of settlement options that are more likely to be tailored to stakeholders' needs; and the saving of time (Environmental Protection Agency 1995).

Describing ADR as a more effective problem-solving or policy-making method than such alternatives as litigation or traditional rule-making procedures is a common theme. There are, however, insufficient analyses of environmental dispute resolution efforts, generally, and no comprehensive studies of EDR used in enforcement actions at the U.S. Environmental Protection Agency. Examples of solid, yet limited, existing analyses that do not include EPA enforcement ADR are deHaven-Smith and Wodraska (1996), who examined consensus building in integrated resources planning within the Metropolitan Water District of Southern California; Kerwin and Langbein (1995), who analyzed negotiated rulemaking at EPA; Fiorino (1988), who looked at regulatory negotiation as a policy process at the EPA; Blackburn (1988), who examined environmental mediation as an alternative to litiga-

tion; and Perritt (1986) who analyzed the use of ADR techniques in negotiated rulemaking. There are also public administration scholars who have examined generic conflict resolution techniques (e.g., Lan 1997). Thus, while the literature has generally advocated alternative dispute resolution as a public management response to the problem of environmental conflict, broad studies assessing the lessons from these programs are scarce.

The EPA has experimented with a wide spectrum of alternative dispute resolution applications, ranging from negotiation over policy and regulation development ("reg neg") to the enforcement of environmental laws. Our focus here is on the use of ADR in enforcement activities at the agency, primarily the enforcement of Superfund clean-ups. The EPA has been working to develop and implement a comprehensive alternative dispute resolution policy for site-specific enforcement actions since the early 1980s (Environmental Protection Agency 1995).[5]

In 1985, the EPA's Region V volunteered to establish an ADR pilot project for use in Superfund cases. From the pilot, agency staff identified seven factors, ordered roughly by importance, for evaluating the mediation potential of a Superfund case:

- the EPA's willingness to litigate;
- identification of issues suited to mediation;
- timing considerations;
- nature of the parties to the dispute;
- number of parties and participation by nonparties;
- amount in dispute; and,
- the ability of the parties to share mediation costs (Environmental Protection Agency 1995: 346).

In 1987, the agency deemed the pilot project a success and began to use ADR in more cases throughout its regions. The 1987 report, "Final Guidance on Use of Alternative Dispute Resolution in EPA Enforcement Cases," allowed the use of mediation, arbitration, fact-finding, and mini-trials (Cooke 1999).

Superfund Cases and ADR

While the agency over the past decade has used ADR techniques in a growing range of programs, Superfund clean-ups were the primary focus of the EPA's dispute resolution efforts in the enforcement arena. Commonly known as Superfund, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was enacted in 1980 and amended in 1986. This legislation has since been termed a "full employment act for lawyers" (O'Leary et al. 1999: 38). The Superfund legislation attempted to address the clean-up of land contaminated with hazardous waste. To do so, it created a fund that could be used to cover the expenses of cleaning up, but

more controversially, it allowed the EPA to sue polluters retroactively for the costs of clean-up. Also, the legislation created strict, and joint and several liability for the clean-up, meaning that polluters were liable regardless of whether or not they had fully complied with the law for waste disposal (strict), and any one polluter could be held liable for the entire costs of the clean-up regardless of the number of polluters who contributed to the problem (joint and several). A governmental entity, private party, or nonprofit organization does not have to be directly responsible for the disposal of the waste to be held liable — it is enough that the entity merely generated the waste (Stoll 1991). As such, disputes may occur on several levels: between the EPA and the potentially responsible parties (PRPs) about the total costs, methods of clean up and allocation of clean-up expenses, among the PRPs about the allocation of cleanup expenses, or both of the above.

Several scholars have reviewed the Superfund program for the potential use of ADR to resolve these disputes. In 1990, Abbott asserted that, although ADR held great promise for Superfund enforcements, it had slim chances of being successfully utilized (Abbot 1990). Due to the reluctance of EPA officials to use the process and the PRPs' "fundamental distrust of the settlement process," Abbott doubted that Superfund-related alternative dispute resolution would live up to its promise (Abbot 1990: 64). She documented several cases of successful ADR, including one mediation, four arbitrations, and one mini-trial (Abbot 1990: 48-52). She found, however, theoretical and pragmatic problems with the process because "public issues are resolved in part by private parties," and the EPA's ability to write contribution protection into consent decrees with settling PRPs may present serious constitutional questions as to the rights of non-settling PRPs (Abbot 1990: 64).

Charla and Parry found that using alternative dispute resolution at Superfund sites had both positive and negative implications for PRPs (Charla and Parry 1991). At many sites, PRPs had formed steering committees to discuss and resolve problems such as negotiating consent decrees or administrative orders with the government, performance or supervision of a surface removal, and cost allocation among the parties. Innovative committees had employed a third-party neutral to perform binding or nonbinding arbitration to resolve allocation and other issues (Charla and Parry 1991: 92-93). According to Charla and Parry:

> When properly utilized, a number of ADR techniques provide good results at sites, including equitable allocations of liability, competent development of facts, facilitation and mediation services, and savings of time and transaction costs. Negatives can be high expenses, protracted delays, work product of questionable quality and failure to accomplish outcomes intended by the steering committee (1991: 97).

Consequently, the authors determined it was important for PRP steering committees to carefully weigh their needs and select the proper alternative dispute resolution technique.

In the mid-1990's, ADR gained more widespread acceptance and application in enforcement cases. The agency's Office of Enforcement issued a policy memorandum in 1993 to its regional offices encouraging the use of ADR, particularly arbitration, for recovery claims where the amounts of pollutants contributed by each party were generally small (Diamond and White 1993). By 1995, when the agency issued a comprehensive policy for ADR in enforcement actions, it had used ADR in over 50 enforcement-related disputes ranging from two-party Clean Water Act cases to Superfund disputes involving up to 1,200 parties (Environmental Protection Agency 1995).[6] EPA developed an Allocation Pilot Program in 1995 under the Superfund Administrative Reforms. The allocation pilot used consultants to assign shares of responsibility to PRPs while EPA assumed responsibility for the "orphan share" (i.e., shares of parties that are defunct, insolvent, or missing) [Koyasako 1998]. According to Hyatt (1995) ADR became "virtually the norm at multiparty Superfund sites [among private party PRPs] for resolving contribution claims" (Hyatt 1995).

Comparing Theory and Practice

Implementing an ADR policy for enforcement cases at the Environmental Protection Agency has not been an easy task, and as such, provides an interesting window into the use of conflict resolution techniques to resolve environmental (and other) disputes. While the ADR literature is growing, few of the recommendations and assertions found in the literature have been tested or compared with cases outside those described in the article in which they were originally reported. The following sections compare the reality of the EPA's enforcement ADR program with the theories found in the literature.

What are Incentives and Disincentives to Enter into a Dispute Resolution Process?

A fundamental issue in the literature concerns the incentives of parties to a dispute to use a dispute resolution process. One of the most prevalent debates in the literature is whether or not mediation is more cost-effective and faster than litigation. There are many assertions that ADR is more cost-effective and speedier than litigation both for the government and for the private sector (e.g., see Anderson 1985; Ryan 1997). In fact, a primary impetus for the use of alternative dispute resolution at the EPA was to resolve Superfund disputes more cheaply and quickly than litigation (Gilbert 1989). On the other hand, others caution that while litigation is more expensive, mediation should not be seen as a free ride. In extremely complex cases, the process of mediation takes time and thus money (Dean 1998). Others have disputed the view that mediation is less costly or faster than the courts at all, claiming that "traditional litigation is actually less costly and time-consuming because clear rules and precedents are established which preclude later litigation" (Abbot 1990, citing Brunet). Similarly, a recent Rand Corporation

study of ADR in federal district court cases found "no strong statistical evidence that the mediation or neutral evaluation programs . . . significantly affected time to disposition, litigation costs or attorney views of fairness. . ." (Kakalik 1997). Yet another view is that private parties make the decision to mediate based on an overall cost-benefit analysis predicting the chance of overall loss or gain from going to court plus the transaction costs of litigation or mediation (Steenland 1996).

While efficiency or time and money are listed as a primary reason to use ADR, many scholars cite other incentives for entering ADR processes. These include the idea that people like to participate in their own dispute and may prefer the less confrontational, "bargaining methods" of ADR (McGovern 1997). Some argue that ADR produces superior results, by building trust between parties, allowing parties to cut past the posturing and negotiate on the heart of the matter at hand (Abbot 1990). ADR may be particularly helpful in providing a forum to communicate more openly about complex technical and scientific matters and allow parties to tailor more precise agreements (Charla and Perry 1991; Abbot 1990). Finally, a negotiated settlement might ensure that all parties are committed to the successful implementation of an agreement (Moore 1996; Charla and Perry 1991).

Conversely there are a number of ideas about disincentives to enter into mediation. One of the most frequently cited is power imbalances in the relationships between parties: "Inequality of [bargaining] power does not lend itself to a negotiated settlement because it discourages the party with power to avoid meaningful negotiations and works against the building of trust" (Abbot, citing Riesel, 55, footnote 34). Closely linked to this concept is the idea that the parties to a dispute need to reach a stalemate where neither has a clear advantage over the other, but both are disadvantaged by the current state of affairs (Kriesberg 1999; Ryan, citing Cormick, 1997). Others argue that those without power will not want to mediate in a situation where they are at a disadvantage, that mediation "locks in" power differences (Amy 1987; Nader 1995). The Superfund laws give the EPA broad enforcement authority with standards, therefore making it very difficult to defeat the EPA in court. Thus these laws provide an opportunity to look at the impact of power asymmetry either as an incentive or a disincentive to negotiation processes.

The results from our research support several streams of this literature. Concerning ADR processes in enforcement actions, there is a perception among PRPs that ADR saves money in transaction costs and resolves the dispute more quickly than litigation. In fact, in response to an open-ended question about why they chose ADR, over one-half of the PRPs in our study specifically cited time and cost savings as a reason that they chose mediation. Given that the rest of the responses covered a range of reasons including being ordered to by the court or just 'going along' with other PRPs in a large group, this response stands out as the primary reason that the private sector parties voluntarily chose ADR. This response was closely coupled

with comments about ADR being preferable to litigation. Additionally, many PRPs cited time and money saved as not only why they went into mediation but also as a positive outcome from the process.

Other reasons PRPs cited about why they chose the ADR process generally revolve around increasing communication and flexibility in determining a resolution to their dispute. Several PRPs mentioned that a reason to enter ADR was that they thought mediation might give them opportunity to better communicate their concerns to the EPA or to the other PRPs. As one PRP described it: they hoped that mediation would allow them to "show [EPA] the error of their ways." This was coupled with the idea that ADR helped "take the edge off" enforcement of Superfund legislation — or PRPs perceived it as potentially shoring up their weaker position, they might "get a better deal" through ADR or the EPA might be more flexible and open to options.

This last comment foreshadows the response of the EPA to ADR. In theory, it is the EPA policy to consider ADR alongside more traditional fora, such as litigation and prelitigation negotiation. Researchers have suggested many reasons that the EPA should have an incentive to mediate, including: saving the legal departments and taxpayers time and money (Abbot 1990) meeting congressional demands for an increased number of clean-ups (Anderson 1985); or simply following President George Bush's 1991 executive order (no. 12778) to attempt settlement and offer ADR prior to litigation.

EPA attorneys offered a variety of reasons that they entered into ADR. Several mentioned time and money saved for the agency. (Additionally, several mentioned this as a very real outcome of shifting from negotiation or litigation to an ADR process.) However, in contrast with the PRPs, saving time and money was not an overwhelming response. Other attorneys indicated that they liked the increased flexibility of crafting a resolution, as opposed to the constraints of litigation. A few reported feeling more in control of their case than if they were before a judge. One attorney interviewed, for example, remarked that "throwing a case before a judge" represented the ultimate loss of control, whereas mediation increased the amount of control attorneys and parties have, since resolution only occurs through consensus. Some said they chose ADR because it forced the parties to be civil, as opposed to adversarial. At the same time, some seem to have entered into ADR because they were ordered to do so by a judge.

Insofar as there were disincentives to enter mediation, the responses of the EPA regional ADR specialists, third-party neutrals, and the PRPs indicate that there are powerful disincentives for the EPA to come to the table. These two groups hardly mention the PRPs when discussing the state of the ADR program. There is little evidence at least from our survey that the PRPs are distrustful of ADR process or are particularly hesitant about it — either from the PRPs themselves or from those who are looking broadly at the EPA's alternative dispute resolution program. Rather, a recurring and almost universal theme was that the EPA agency attorneys were struggling with the

concept of ADR in the Superfund context. Conflicting views of EPA's incentives to mediate can be found in the PRP response to the question of EPA "helpfulness" in establishing an ADR process. A little under one-half of the PRPs found EPA moderately or very helpful; however, the other half found the agency very unhelpful. As one respondent put it, "the agency had to be dragged kicking and screaming" to ADR. The fact that our sample consisted of mediated cases (as well as several cases that are EPA-funded negotiations between PRPs) is likely to have biased the responses towards the EPA being "helpful."

The interviews with EPA regional ADR specialists and the third-party neutrals who helped mediate Superfund disputes have also indicated ambivalence, if not overall negativity, within the agency about the role of mediation. While there were many positive signs, such as increased use of ADR due to increased training and education about successful cases, the ADR specialists and the neutrals still reported prevalent concerns among other EPA attorneys. According to these groups, the EPA lawyers have told them "If I can win, why mediate?" or "ADR is great, but just not for this case." They reported the perception among attorneys that using ADR is a sign of a weak case, or that they need help as a lawyer-negotiator. The attorney's themselves reported a fear of loss of control over their case once in the ADR process. Several mediators, as well as PRPs, mentioned that EPA and Department of Justice attorneys were "forced" into mediation by a judge.

Some of this stems, undoubtedly, from traditional law school education where attorneys are taught that to represent their clients zealously they must act in an adversarial fashion. However, one author writing on ADR training sessions notes that EPA staff attorneys regularly question why they should mediate when the agency has "sweeping, unilateral powers of enforcement" (Peterson 1992: 332). It would seem that, despite efforts to promote ADR within the agency (as well as the satisfaction with the program of most EPA enforcement attorneys who were interviewed), there are countervailing pressures that undermine the use of ADR. A possible explanation may be the premier power status that the agency and agency attorneys have under environmental law, particularly the Superfund law. This reluctance to step back from a legally powerful position in favor of a dispute resolution process may well be reinforced by past negative publicity about letting polluters off the hook (Anderson 1985).

Another way of looking at the issue is that the EPA and the PRPs have not reached the "hurting stalemate" that Kriesberg hypothesizes is a precursor to successful conflict resolution (Kriesberg 1999). The power is too heavily on the side of the EPA to want to cede any advantage through mediation. Interestingly, while power theory would also hold that the weaker party should not negotiate because mediation simply reinforces the power imbalance, here PRPs seem very willing to come to the table.

While still exploratory, the findings of our survey support the idea that there is a strong perception, at least in the private sector, that ADR saves time

and money. Additionally, the findings support the theory that parties in power will be reluctant to use dispute resolution and suggest that those without power tend to favor ADR. This, in turn, suggests that there is an underlying perception that power is lost (or equalized) through ADR processes — rather than locked in place as some have suggested. Ironically, the next section suggests that power is not in fact locked in place or ceded to the other side in any real way. Instead, those with power walk away from the table when they feel that they lose control over the process or outcomes.

What Are the Key Elements Needed for the Successful Resolution of Environmental Conflicts?

The literature concerning the key elements needed for the successful resolution of environmental conflicts is broad and diffuse. One of the reasons for this variety is thea fundamental disagreement about what constitutes "success" in ADR. We define success simply as a situation where the parties in an ADR process reach a signed agreement. However, even given this definition, there are multiple views about what the key elements are in reaching an agreement. For example, a survey of the opinions of mediators found that ingredients which contribute to successful environmental mediation include the desire to resolve differences, commitment, a neutral third party, understanding of technical issues, and compromises (O'Connor 1978). Based on three mediated negotiations at the EPA, OSHA (the Occupational Safety and Health Administration), and the Federal Aeronautics Administration, Susskind (1985: 22) concludes that there are five common ingredients to successful mediated negotiations (including environmental regulatory negotiation): "(1) participation by representatives of key stakeholding interests (both able and willing to commit their membership); (2) joint fact-finding aimed at developing a shared view of the problems or issues at hand; (3) face-to-face negotiation, typically aided by a nonpartisan mediator or facilitator; (4) a focus on inventing the best possible ways of dealing with difference, ideally through trades that maximize common gain; and (5) the preparation of a written agreement that all participants agree to help implement."

Wondolleck et al. (1996) take these views many steps further in their conclusions based on an examination of six case studies and extensive interviews with citizen group participants in ADR processes. The most successful efforts, they found, are those in which the participants have some of the requisite skills — political savvy, negotiation, and communication skills — as well as the energy and resources to devote to the process. As mentioned earlier, having parties with equal power at the table or equal incentives to mediate is often considered a key ingredient in the successful resolution of conflict, as well as key in bringing parties to the table.

In our research, we tested for several of the elements listed above as well as whether mediator characteristics affected the outcome of ADR processes. Overall, three factors stood out as being key to the successful res-

olution of an environmental enforcement conflict through ADR: control, having key stakeholders at the table, and communication. There were less conclusive results concerning key characteristics for mediators.

The issue of control is one that is not well defined in the literature. One of the guiding ideas of ADR is that the participants should have control over designing the outcomes. Some advocate control over the specific mechanics of a mediation as well as subsequent decision making (Folberg 1988); others define control as extending merely to the process of decision making (Carpenter and Kennedy 1985). In the EPA enforcement attorneys' responses to questions about their views of the mediation processes, there is a very close association between the attorneys' sense of "loss of control" over the process and the outcomes, and the failure of the mediation to reach an agreement. The concern over control is strong for PRPs as well. The mean enforcement attorney response to the question of "control over the process" for those cases that failed was 2.88 as opposed to a mean of 1.97 for those cases which were successful. (On our Likert scale, 1 is "very satisfied" while 5 is "very dissatisfied.") Similarly, the averages for "control over outcome" were 1.91 for successful cases and 2.59 for those that failed. In contrast, several attorneys made unprompted comments that giving up control was necessary to reach a resolution. Control was an issue for the PRPs though not as strong as it was for the attorneys. It was significant only as it related to control over the outcome. These results mirror the earlier results about EPA concerns over losing power when they enter mediation (and PRP views that they gain control). However, it raises the question whether power is really lost, since clearly the more powerful party has the ability to walk away from an agreement where there is a "loss of control."

In general, both enforcement attorneys and PRPs reported satisfaction with the other elements of the enforcement ADR processes, regardless of the outcome. Average scores on the Likert scale were all in the "very satisfied" or "satisfied" range: for "amount of information received" the scores were 1.66 for attorneys and 2.05 for PRPs; for "opportunity to present your side" the scores were 1.43 for attorneys and 1.23 for PRPs; for ability to "amount of participation" the scores were 1.37 for attorneys and 1.39 for PRPs; and for "fairness of the ADR process" the scores were 1.48 for attorneys and 1.23 for PRPs.

From the perspective of the third-party neutrals, having the key stakeholders with decision-making authority at the table was a key element needed for the successful resolution of the conflict. While expressing strong support for the EPA's encouragement of alternative dispute resolution processes generally, a majority of the third-party neutrals expressed frustration in three key areas concerning who was at the table: their inability to get the EPA itself to the table; if EPA was represented at the table, the fact that the representative usually had no authority to commit to a resolution; and a frustration with their inability to get key Department of Justice decision makers to the table, or to obtain access to them generally. When key

stakeholders were not at the table, mediators reported that the conflict generally was not resolved.

There is one last element of the process that was closely associated with the ability to reach a successful outcome — the issue of communication and the related issue of feeling that the other party in a dispute learned about or understood your interests. While not heavily emphasized in the environment-related alternative dispute resolution literature, the general literature on ADR and mediation heavily emphasizes communication. Fisher, Ury, and Patton (1991: 14) emphasize the importance of a "discussion stage" of negotiation where "differences in perception, feelings of frustration and anger and difficulties in communication can be acknowledged and addressed." Similarly, Katz and Lawyer (1983) focus on the importance of communication in resolving conflicts. Carpenter and Kennedy (1985) identify "establishing regular and predictable communication" as a key element in their conflict resolution design.

Improved communication seems to be a particular concern for the PRPs. It is interesting to note that several of the PRPs specifically mention communication problems as a reason for entering mediation. When asked whether "others learned," there was a significant difference in the mean responses for those cases that reached resolution (1.67) and those that failed (2.71). Interestingly, there is also a significant difference in the answer to the question whether "I learned" from the mediation process, with an average of 1.78 for cases successfully resolved and 3.29 for those that failed. While these measures were not significant for the EPA attorneys, the "opportunity to present your side of the dispute" was significantly different for those cases that succeeded compared with those that failed.

Similarly, when asked about the "opportunity to discuss multifaceted issues that are often not addressed in litigation," those PRPs who participated in cases where the conflict was resolved reported an average score of 1.67, while those in unresolved cases reported a score of 2.60. Here, the EPA attorneys also showed the importance of discussion, reporting mean differences of 1.82 and 2.53 for resolved-versus-unresolved mediation cases.

One area of contention in the literature is whether the number of parties involved in a dispute affects the chances for a successful outcome. Some have argued that efforts to resolve environmental disputes can only have a limited number of disputants participate if they are to be successful (Carpenter and Kennedy 1985; Susskind 1987). Gail Bingham, however, in her landmark study of environmental dispute resolution, found no correlation between the number of disputants involved in a process and the successful outcome of a negotiation. In fact, she found that there were slightly more disputants in cases that were successfully resolved (Bingham 1986). Our study findings support Bingham. The number of disputants in the various processes ranges from two to 500 and appears to be evenly distributed across successful and unsuccessful resolution of disputes.

What are the Important Mediator Characteristics Needed for the Successful Resolution of Environmental Conflicts?

In a list of components against which mediators should be evaluated, one author notes that the mediator should be prepared, empathic, problem-solving, have persuasion and presentation skills, be able to minimize distractions, manage the interaction and have a substantive knowledge of the subject area (Honeyman 1990). These areas seem to be reflected to varying degrees throughout the literature. There is a modicum of dissent concerning how knowledgeable the mediator needs to be about the subject matter of a case. In a case study of the Alaska Forest Practices Review Act, for example, the authors found that technical expertise was less necessary than expected; yet even they noted that negotiators whose sole expertise was process should be teamed with ones with more substantive knowledge (see Gaffney 1991). Most argue that substantive knowledge is critical in helping parties collect and review relevant information (Louis 1999; Abbot 1990). In some circumstances, a mediator needs to act in a purely facilitative role. However, most argue that this may be counterproductive in environmental disputes (Susskind 1987).

As conventional wisdom suggests, the role of the mediator is important but not decisive. In our study, although there was general satisfaction with the mediators, respondents cited an inconsistency in the quality of mediators in the areas of knowledge about the subject area and ability to control strong-willed attorneys. As such, it indicates that conclusions about a firm grasp of the subject matter and a strong role for the mediator may be warranted. Otherwise, there were no significant statistical differences in the responses to questions that evaluated the performance of the mediators relative to the success or failure of the dispute. Additionally, the scores were equally high with PRPs and EPA attorneys. Mediator performance overall received a 1.46 from the PRPs and a 1.57 from EPA attorneys. Not surprisingly, the mediators reported overall that they were either very satisfied or satisfied with their own performance in each of the cases we reviewed.

The EPA contracts out most of its environmental dispute resolution mediator assignments to nonprofit or private companies that specialize in environmental mediation, and it is likely that the high ratings for the mediators are a reflection of their professionalism. The lack of difference in scores between resolved and unresolved cases suggests that there are elements beyond the control of mediators that ultimately determine the outcome of the case, as discussed in the previous section.

Conclusions

The findings of our study support much of the conventional wisdom of those who work in mediation as well as the theory found in the literature. Why do parties to a dispute choose ADR? The common themes found throughout this research are: to save money, to save time, to have greater control over the outcome, to educate, to communicate with the other par-

ties to the dispute, to "get a better deal," and to preserve flexibility in crafting an agreement. What are the key elements necessary to the successful resolution of environmental conflicts? Undoubtedly there are many, but the three that were most often mentioned in our study were: giving parties control over the process, getting key stakeholders to the table, and communication among the parties. What are the characteristics that are important for mediators to have? They should exhibit basic competence, knowledge of the subject matter, and assertiveness with difficult stakeholders. Finally, does the number of parties to a dispute affect the outcome of ADR efforts? Absolutely not.

Some of the more interesting results of this research relate to the role of the powerful and their willingness to mediate. Opponents of mediation have suggested that mediation locks in power differences to the detriment of the less powerful (Amy 1987; Nader 1995). While far from conclusive, the results here actually suggest just the opposite. Some of those who are powerful in a legal sense, in this case the EPA, are actually reluctant to mediate because the process entails giving up a level of control. Those who are less powerful, the PRPs, appear to be far more willing to mediate and save themselves the time and cost of litigation — and through better communication reach a better agreement for themselves.

After nearly two decades of practice, the EPA has elevated alternative dispute resolution from an experiment to a full-fledged program. The results of this study confirm numerous benefits of ADR which have long been purported in theory and espoused by practitioners. However, the study also reveals significant concerns among EPA attorneys that will need to be addressed if enforcement ADR is to become a more accepted norm at the agency. The EPA recently announced plans to expand ADR throughout the agency.[7] By examining the microcosm of enforcement ADR, we hope that this study will provide the EPA with additional insight into the motivations of participants in all types of dispute resolution processes. Other public entities that wish to initiate ADR programs might also gain from these findings.

In retrospect, the EPA seems to have profited from its iterative approach of beginning with a small pilot program in a single region and assessing the results before expanding to an agency-wide effort. Despite the promising findings of this study, all parties involved in the research, practice, and implementation of ADR programs must bear in mind that this is still a nascent field — one which requires further research on the indicators of ADR success and failure.

NOTES

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1. The primary source of these government statistics was the "Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency Enforcement and Site-Related Actions," which was published in December 1999 by the U.S. EPA Enforcement ADR Program,.

2. The primary sources of archival records were U.S. EPA Office of Site Remediation records and Lexis consent decree files.

3. The EPA sent us a list of 45 third-party neutrals. From this list, seven stated they had never served as a neutral on an EPA case, five could not be located due to a change of address, three declined to participate, and seven could not be reached.

4. These were primarily Superfund enforcement cases. However, a few were cases pursued under the Resource Conservation and Recovery Act (RCRA); the issues at stake (i.e., negotiating costs of clean-up) are very similar to those under the Superfund legislation.

5. Enforcement actions eligible for environmental dispute resolution include those filed pursuant to the Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA, also know as Superfund); the Resource Conservation Recovery Act (RCRA); the Clean Water Act; and the Oil Pollution Act.

6. EPA had also established an ADR Headquarters Team and ADR specialists in each of its regions to provide staff support and training. In addition, a contract with a private firm, RESOLVE, made ADR services readily available. For additional insights and research on Superfund ADR, see Gilbert (1989).

7. *Federal Register* 65(49): 13 March 2000.

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