

Chapter 12 *in*

Two Paths Toward Sustainable Forests: Public Values in Canada and the United States

**Bruce Shindler, Thomas Beckley, and Carmel Finley (eds.)
OSU Press, 2003**

Implementing Adaptive Management: An Evaluation of AMAs in the Pacific Northwest

Bruce Shindler

Governments in Canada and the United States are experimenting with adaptive management as they seek to sustain forest systems. Two central components of adaptive management are monitoring system inputs and evaluating responses. Not only do these activities apply to the ongoing management of biophysical resources, they also are essential to learning about the interactions—or lack of interaction—among citizens, managers, and scientists. Throughout this book authors have noted the importance of positive community relations and the benefits of integrating citizens into decision processes. In the Pacific Northwest, an important opportunity for assessing such processes is found in the Adaptive Management Areas (AMAs). Ryan discusses the origin of these sites in the previous chapter. Ten AMAs were designated in Washington, Oregon and northern California in 1994 as places for ecological, social, and organizational learning: “These areas should provide opportunities for land managing and regulatory agencies, other government entities, nongovernmental organizations, local groups, land owners, communities, and citizens to work together to develop innovative management approaches.”¹

This chapter summarizes research undertaken five years after formation of the AMAs to assess agency effectiveness for involving stakeholders at the ten sites. As Ryan described, both the U.S. Forest Service and the Bureau of Land Management have jurisdiction for AMA implementation. To help determine the ability of these agencies to adequately engage the public in implementation activities, citizens and federal forest agency personnel were surveyed about their experiences. The citizen surveys were designed to help managers and researchers understand what citizens think is important in their interactions with AMA personnel and to assess the nature of those interactions from the public’s perspective. The agency survey followed the same format; it was intended to monitor progress from an internal point of view and to provide a means for comparing the opinions of resource professionals with those of citizens. Taken together, the data provide a report card on attempts to integrate communities and citizens into the AMA experiment and also establish a baseline for further monitoring and evaluation. Additionally, this analysis offers a method for assessing the level of agreement among citizens and agency personnel about important aspects of program implementation.

The citizen survey sampled members of the *attentive public* in communities surrounding the ten AMAs. Attentive public is a term used to describe individuals who have more than a passing interest in a particular topic; essentially, these are people who pay attention to a project, problem, or issue. Analysts often equate “attentiveness” with political involvement in the democratic process.² In this case, the sample derived from citizens who chose to become involved with their local AMA. Names and addresses were obtained from AMA mailing lists and sign-in sheets from various activities. The 418 completed surveys—a 74% response rate—were well dispersed across the ten sites, indicating a representative sample of people who paid attention to the AMAs. For example, 73% had attended an information meeting or open house; 71% received the AMA newsletter; 66% had phoned, written, or visited agency personnel to discuss an idea or problem; and 53% had gone on an agency field trip to a forest site. In the survey, three quarters of these individuals reported they give a great deal of attention to federal forest issues in their area.

The agency survey was completed by 105 resource professionals (reflecting an 83% response rate) who had various levels of responsibility at the ten AMAs. This sample derived from lists provided by AMA Coordinators of individuals involved on AMA planning teams. Most were resource managers from Forest Service ranger districts, others were BLM District personnel and a small group of agency scientists who had been assigned to each AMA. On balance, these were the agency members best qualified to assess public interaction on the AMAs. For example, the survey revealed that these individuals averaged 10 years at their current work station, 63% said their agency expected them to have frequent front-line contact with the public, and 64% had received formal training from their agency in public interactions. Overall, 87% believe that involving the public is an effective method of resource management.

Discussion of Findings

Efficacy of the AMAs

Initially, we wanted to know how people felt about the efficacy of agency efforts for implementation of their AMA, particularly actions that involved citizens. Table 1 provides data on how respondents feel about the AMAs as places to conduct forestry research and how well the public is being incorporated into activities. Although a large majority of citizens (70%) and agency personnel (92%) agree that the AMAs are appropriate places for scientific research, the public’s ability to be part of the adaptive management experiment appears more problematic.

Table 1. Efficacy of AMAs

	Citizens	Resource Professionals	Significance Level
	Agreement	Agreement	
Scientific experimentation with forest ecosystems is appropriate On AMAs.	70%	92%	<.01
Forest agencies have clearly identified for the public what AMAs are intended to be.	40%	36%	NS
Agencies have clearly identified the role of citizens in AMAs.	34%	29%	NS
I feel that citizens can actually participate in planning and management activities at my AMA.	49%	68%	<.01
Forest Service and the BLM are open to public input and use it in making decisions.	41%	73%	<.01
Efforts by local forest managers to involve the public do not have full support of national agency leaders.	40%	8%	<.01

Five years after inception of the program, less than half of the citizens and even fewer resource professionals thought the agencies had either identified what AMAs are intended to be or the role citizens should play in their management. Previously in 1997, researchers had cautioned the agencies over the need for clear purpose statements about AMAs and that leadership would be required to eliminate public confusion about the agencies' intent for these sites.³ That same year an assessment of public process on the Central Cascades AMA in Oregon found that citizens believed forest projects were more successful when the public's role was defined and a desired end product was identified at the outset.⁴

In the current survey, citizens generally felt their input was discounted; less than half believed they could actually participate in planning and even fewer thought the agencies used their suggestions in making decisions. Equally distressing is that 40% think that local managers do not have the full support of their national leaders. Throughout the region there appears to be a growing sentiment among members of forest communities that local forest managers, in many cases individuals they have come to know and trust, are hindered from doing their jobs because of directives from Washington, D.C. or by pressure from national interests (NGO's) outside their local area.⁵ In contrast, most agency members responded just the opposite to each of the last three statements about citizen participation. On reflection, there appear to be at least three potential reasons for these differences in opinion: 1) the agencies are having difficulty getting their message of open participation across to constituents, 2) the public does not believe managers will, or can, fulfill the promise of citizen participation; and 3) there is simply no compelling evidence that managers are communicating with or involving the public. In the last instance, we find a common dilemma—sometimes the problem with evaluations is that there is nothing to evaluate. In any case, there seems to be a high degree of public cynicism about

cooperation on the AMAs, a point also reflected in many of the interview comments by citizens in the following chapter.

AMA Implementation

Next, we began the process of assessing AMA implementation. In a framework developed for adaptive management situations, Shindler et al. identified two conceptual levels from which to monitor and evaluate citizen-agency interactions.⁶ The first involves the broad goals, or desired outcomes, of productive interactions. Several syntheses of public involvement research have articulated five essential goals for such programs.⁷ In general, public processes can be used to:

- 1) improve the quality of decisions.
- 2) reach decisions that enjoy increased public support.
- 3) contribute to the building of long-term relations.
- 4) incorporate citizens ideas and knowledge in decisions.
- 5) learn, innovate, and share results with others.

To determine the extent to which these broad goals were being achieved on the AMAs, a set of eight related statements were evaluated by citizens and agency members (Table 2).

Table 2. Agency Goal Achievement at AMAs

Goal	Citizens	Resource Professionals	Significance level
	Agreement	Agreement	
Showing concern for local communities and their well-being	49%	76%	<.01
Contributing to good relationships with citizens	48%	67%	<.01
Contributing to public knowledge by educating communities about benefits and costs of proposed plans	44%	49%	NS
Incorporating citizens' ideas and knowledge in decisions	40%	67%	<.01
Increasing innovation and creativity in programs and projects	39%	53%	<.05
Improving the quality of decisions by effectively involving citizens	36%	52%	<.01
Building trust and cooperation with citizens	32%	48%	<.01
Reaching decisions that enjoy increased public support	25%	42%	<.01

NS = not significant

Overall, findings indicate little agreement between the public and resource professionals on any item; in no case did a majority of citizens agree that goals were being met on the AMAs. Perhaps not surprisingly, agency members believed to a much greater extent that they were being

successful; strong majorities felt they were showing concern for communities, building good relationships, and using citizens' ideas in decisions (all indications that "we are trying").

Responses are notable for the significant gap they reveal in the two group's perceptions. The collective data show a difference between how agency staff feel they are treating citizens and how citizens feel they are treated by staff, reflecting a substantial and fundamental disagreement over the quality of their interactions. As a result, judgments about desired outcomes are particularly low, especially among the public. For example, relatively few citizens (36%) believed the quality of decisions was improved through citizen involvement or that public support for decisions had increased (25%). Perhaps the most distressing statistic, however, is the low number of citizens (32%) who thought that public trust and cooperation were being built on the AMAs.

The repercussions of such disagreement in views can go beyond the normal frustrations we might expect from either side in the search for collaboration. While we have become familiar with the public's discontent, we often fail to recognize common reactions among personnel who think they are doing a good job but find out their efforts reap little success. In these situations, it is easy to point a finger at a public who "just doesn't get it" or figure that "it's their problem." These are normal and legitimate reactions by individuals who may be doing the best they can under difficult circumstances. Such situations call for a new approach and a different set of public communication tools.

The second conceptual level for evaluating citizen-agency interactions involves examining more specific attributes. Although examples of successful public involvement have been found in a wide range of situations, there is general agreement among researchers about a number of common characteristics.⁸ These can be organized into four basic categories: interactions that are 1) inclusive and interactive, 2) procedurally sound, 3) innovative and flexible, and 4) outcome or results oriented.

Shindler et al. developed a framework for monitoring and evaluating these interactions in adaptive management settings using a set of core attributes for measuring whether certain objectives were being achieved.⁹ These 18 objectives (see Table 3) were used in the current survey to determine to what extent interactions on the AMAs were inclusive and interactive, procedurally sound, innovative or flexible, and results oriented. However, prior to asking citizens if these public involvement objectives were being achieved, we also asked them (on a four-point scale) *how important* each objective was. For simplicity, these results are not reported in Table 3, but for all 18 objectives more than 80% of the respondents said these attributes were either important or very important to them. Many items received importance ratings over 90%.

Table 3 shows that in most cases citizens did not think the objectives were being met, while agency members generally had a higher opinion about the level of success. The only area where a majority of citizens believe achievement has occurred is in the **inclusive/interactive** category. It is clear that many citizens believe the agency is making an honest effort to create additional opportunities for interaction. The table also shows that most people felt welcome at meetings, that meetings are interactive and personal, and that AMA personnel are sincere, honest, and open to suggestions. Fewer believed they were shown consideration for their efforts and that public deliberation was encouraged. As mentioned, resource professionals generally

gave higher ratings to their performance on these objectives, but only 50% could say that deliberation is encouraged. For resource managers, demonstrating good interpersonal skills is critical to the success of public engagement activities;¹⁰ however, proficiency in this area continues to be a stumbling block for agency personnel.¹¹ Whether the modest ratings reported here indicate that AMA personnel have improved their outreach skills cannot be adequately assessed from this one time study; however, the findings indicate that room for improvement exists.

There is little evidence from the three other major categories to suggest that citizens see a high degree of success in agency public involvement efforts. It is worth noting that one category—making sure agency efforts are **procedurally sound**—is part of the public process equation that does not necessarily require a high degree of interpersonal skill to accomplish. Instead, this set of objectives requires that AMA personnel take public outreach seriously and attend to procedural tasks simply because they are important and legally required. Most agency members believed they were following through on these responsibilities; however, this view was not universally shared by the public. For example, most citizens did not see line officers and senior decision-makers participating in public planning activities, an important element because it provides stakeholders some assurance that leadership is being exercised and they have been heard by the individual who will ultimately render a policy decision.¹²

Table 3. Achieving specific public involvement objectives

Objective	Citizens	Resource Professionals	Significance level
	Agreement	Agreement	
<i>Inclusive/Interactive</i>			
• All citizens are welcome at meetings or planning sessions.	63%	71%	NS
• Public meetings are interactive and personal.	57%	67%	NS
• Agency personnel are sincere, honest and open to suggestions.	53%	75%	<.01
• Citizen participants are shown consideration for their efforts.	49%	75%	<.01
• Public deliberation is encouraged.	47%	50%	NS
<i>Procedurally Sound</i>			
• Decision-makers regularly attend and participate in public planning activities.	47%	78%	<.01
• Efforts to involve citizens start early and continue through all stages of a project.	42%	64%	<.01
• Agency information is current, reliable and easily understood.	41%	47%	<.05
• Controversial issues receive genuine attention and a sufficient response by agency personnel.	33%	69%	<.01
<i>Innovative/Flexible</i>			
• Activities foster relationship building among group members.	36%	54%	<.01
• Efforts to involve citizens are innovative and flexible.	33%	43%	NS
• Agency personnel and citizens analyze information together to build a collective pool of knowledge.	29%	21%	NS
• When new information arises or a surprise occurs, it is usually factored into subsequent decisions.	27%	72%	<.01

Outcome/Results Oriented

• Local forest issues are given greater attention than national interests.	43%	65%	<.01
• Projects/plans are carefully designed, with purposes and end products clearly identified at the outset.	40%	44%	NS
• Agency personnel follow through on decisions.	35%	64%	<.01
• Citizens can see how their contributions are used in decisions.	23%	31%	<.05
• Citizens understand how decisions are made and which information is used.	22%	18%	NS

NS = not significant

Similarly, citizens want to be involved early instead of being asked to come in “after the decision has already been made.” They also have an expectation that agency information is current and easy to understand. Neither of these procedural functions were rated very high by citizens nor by agency members. In fairness to public outreach personnel, it may be difficult for citizens to accurately assess each of these elements. For example, it is logical that agency members are much better at recognizing when decision-makers attend meetings and at judging the reliability of their information. But the point should not be missed that many citizens often see these areas as agency shortcomings, and perception is often the reality. Opportunities exist in these cases to improve the public’s understanding. However, from the low level of agreement (just 33%) about agency response to controversial issues, there is a clear indication that citizens feel shortchanged in the amount and type of attention given to issues they view as important. It may be there is lack of agreement among citizens and agencies on what constitutes a controversial decision. In these instances, greater sensitivity to public concerns becomes the real issue.

Overall achievement ratings in the **innovative/flexible** category were less than satisfactory, even among agency members. This is problematic, given the central role that innovation and flexibility have in adaptive management. Only about one-third of the citizens believed that relationship-building was occurring or that public involvement activities reflected innovation and flexibility. Resource professionals rated themselves somewhat higher in the first area, but tended to agree with the public regarding innovation. As before, it may be difficult for citizens to accurately judge certain objectives; for example, whether citizens and agencies have analyzed information together or if new information was factored into decisions. But the public’s ratings of these items are sufficiently low to indicate these are areas of weakness. Because agency members largely agree that co-analysis of information is not occurring, it probably is a case where this type of innovation has not been introduced to any degree on the AMAs. One reason, no doubt, is the difficulty in doing so. This activity requires a substantial commitment of time as well as an ability to get beyond the common belief that the public simply does not have the background to adequately evaluate such information. As for using new information in decisions, the high level of agreement among agency members suggests this may be more of a communication gap with the public than staff’s lack of follow through on incorporating new data. Collectively, this set of responses probably reflects the public’s general dissatisfaction with agency performance and responsiveness¹³—developed over many years of interactions—rather than citizens’ ability to objectively rate accomplishments on the AMAs.

Ratings of objectives in the final category—**outcome/results oriented**—were just as low, especially among citizens. A majority of agency members did give themselves higher marks for paying attention to local forest issues and following through on decisions; again these are probably two areas in which agency personnel can more accurately judge their own actions. It is a concern, however, that the public does not share their views. Also of importance is the low level of agreement by both groups about the statement that projected plans are designed so that purposes and products are clearly identified. This objective is critical to success for any planning process,¹⁴ but execution seems to be missing. Another essential point is shared by both citizens and resource professionals: the public does not understand decision processes on the AMAs. This may reflect a shortage of decisions being made on these areas—a common complaint found in the interview data—thus, the public’s inability to evaluate to them.

Of the 18 objectives, the two that received the lowest ratings from both groups were about citizens seeing how their contributions were used and understanding how decisions are made. The first is a shortcoming of the public process and falls to managers for remedy; tracking public suggestions, particularly on relatively small AMA projects, seems straightforward. However, understanding how decisions are made might be more complicated. Among citizens, this can stem from various reasons (e.g. lack of information, their own inattentiveness, poor communication), any of which can be frustrating for either public or agency participants. From a managerial standpoint, for example, some agency personnel may still be influenced by old-line, simplistic beliefs such as “the public just doesn’t understand forest management” or that citizen’s should not have a role in the decision-making process. Either situation has deeper ramifications for reaching productive interactions. Some evidence for this tension exists elsewhere in the survey as 21% of the agency respondents agreed that their local publics possess insufficient knowledge to adequately engage in planning discussions about ecosystem management. In any case, decision processes that are not “transparent” and readily understood by citizens are a problem and it is up to agency managers to address these shortcomings.

Internal Operations

Finally, it was important to understand more about agency internal operations on the AMAs. For this perspective we turned to agency personnel about their general observations of public involvement and their specific experiences regarding the type of support they receive, the success of attempted actions, and potential barriers associated with their AMA. The data have been categorized under these same headings and reported in Table 4.

Table 4. Agency Members Assessments of AMA Public Involvement Efforts

Regarding my experiences with the AMA:	Agree	Disagree
<i>General Observations</i>		
• Involving the public in planning and projects is worthwhile and should be part of how we do business.	93%	1%
• I feel comfortable working with the public.	81%	5%
• We have a successful public involvement program on our AMA.	44%	23%
• I am frustrated with our attempts to involve the public.	33%	36%
<i>Organizational Support</i>		
• My agency has clearly defined for personnel what AMAs are intended to be.	40%	41%
• I have received adequate training to fulfill the public contact part of my job.	63%	20%
• I receive adequate support from my work unit for the public involvement aspects of my job.	61%	20%
• I receive adequate support from administrative levels above my work unit for the public involvement aspects of my job.	48%	26%
<i>Action/Achievements</i>		
• Our AMA is linked to wider community social and economic concerns.	72%	11%
• We have identified who our publics are and how to reach them.	64%	16%
• We have established demonstration projects where we can actually obtain feedback from our publics.	54%	21%
• I have seen new or creative ways of involving the public on our AMA.	47%	24%
• We have tried to find out what local people know about forestry.	37%	25%
<i>Potential Barriers</i>		
• Agency trust/credibility issues are major constraints among our local publics.	81%	7%
• Most local citizens don't understand the concept behind the AMA.	57%	17%
• The agency time frame for producing results is unrealistically short.	46%	26%
• I am hindered in my activities with local publics because of their perception that decisions are really made on a regional or national level.	39%	37%
• Our local publics don't have sufficient knowledge about ecosystem management to adequately participate in planning discussions.	21%	50%

In their **general observations**, almost all personnel (93%) saw value in involving the public. This could mean that individuals simply feel it is the right thing to do or think it is the right thing to say; on the other hand, they may have learned over time that public involvement is a useful and necessary step to reach more lasting decisions. Regardless, inclusiveness is a cornerstone of decision-making and most AMA personnel report feeling comfortable working in this public setting. On the other hand, far less (44%) felt their program was successful and about one-third voiced frustration over their attempts to involve the public.

Regarding **organizational support**, only 40% agreed that their agency had defined what AMAs are intended to be. It is likely these opinions are linked with frustrations about attempts to involve the public, but this also could be a reflection of inadequate leadership for the public outreach job. In any case, a majority of personnel believe they are getting adequate training (63%) and support (61%) from their local work unit (usually ranger districts) to carry out public

interactions on the AMA. Somewhat less (48%) see this same type of support from higher levels within the agency.

In the **action and achievement** category, findings are mixed. Substantial majorities believed their AMAs were linked to broader social concerns of the community and that agency staff had identified who their “publics” are. A smaller majority (54%) agreed that demonstration projects are in place to gain public feedback. However, less than half (47%) saw new or creative public involvement activities occurring. Additionally, only about one-third think AMA personnel have attempted to find out what local people know.

Finally, a number of **potential barriers** stand in the way of progress on the AMAs. Three problems appear critical. Almost all personnel (81%) agree that trust and credibility are major constraints among their local publics. This is not surprising given the rancor that surrounds most federal forest management issues. On AMAs, where some agency members have worked hard to develop positive relations with communities—in many cases well before the institution of AMAs—this is particularly distressing, and no doubt frustrating for those involved. It is likely that other barriers contribute to the lack of trustworthiness in relations; noteworthy is the relatively high number of personnel (57%) who thought that most local citizens do not understand the AMA concept—an interesting point given how few agency personnel (40%) understand it themselves. There is little doubt that the lack of clear objectives about AMA designation and implementation is a frustration for both agency and citizen participants.

Another important barrier is the belief that the time frame for demonstrating results on AMAs is unrealistically short. Previously, Stankey and Shindler acknowledged that successful implementation of adaptive management in the AMAs would take time.¹⁵ Specifically, they noted that pressures for quick results characterize the current culture in the forest agencies, a mentality that will work to the detriment of the AMAs. Given the level of general distrust among stakeholders, sufficient time must be invested for mutual respect to develop. A third concern is that many managers (39%) believed their local publics think decisions are really made by the agency at a regional or national level. Recent studies in Oregon provide growing evidence of this public sentiment,¹⁶ a point of view that could scuttle many AMA programs. A smaller group of agency personnel (21%) felt local citizens did not have sufficient knowledge to participate in planning for ecosystem management. Although this sentiment represents a relatively small minority opinion, such opinions still reflect a “we know best” attitude that can be particularly detrimental to public planning processes.

Conclusion

The most striking features of these data are the perceptual gap that exists between citizens and resource professionals and the demonstrated need for improved interactions among participants on the AMAs. In the first case, a principal issue raised by this series of ratings is not whether citizens or agency personnel are “right,” but why their perceptions differ so widely. Answers to this question are likely to involve obvious explanations; for example, because of their day-to-day involvement and level of personal commitment, agency members may feel quite strongly that they are achieving many aspects of the public outreach job whereas citizens may not share this same perspective. But some explanations are likely to involve more complex ideas

such as differences in the scope of projects that various AMAs have attempted, the degree of trust that exists in these communities, and the quality of leadership evident among agencies and citizens groups. For example, it probably is much easier for citizens and the agency to reach agreement about a Jobs-in-the-Woods Program that provides local employment than it is to reach consensus on how much to harvest in a timber sale. In other situations, the level of trust among participants may be so eroded that no amount of information or encouragement will alter the immediate outcomes.

In addition, the context in which any of these judgments are made is extremely important. Each public process is situationally dependent on a number of factors, many of which are predominantly local. More in-depth qualitative analysis can help reveal the influence of contextual factors on these interactions. In any case, the most promising finding here may be the level of importance given to public involvement activities. There is fairly strong agreement among both citizens and resource professionals that effective, high-quality interactions are essential to AMA success. Ultimately, however, demonstrable results will be necessary before any real long-term gains accrue.

There is also substantial evidence from these findings that improvements are necessary if the AMA experiment is to continue. Many of these ideas are reflected in the notion of *civic science* put forth by Lee in his observations of adaptive management.¹⁷ He argued that the challenge for agencies in effectively managing large ecosystems is to build community relationships that incorporate both science and politics. At its most basic level, adaptive management must be a public activity, open not only to the participants who must exercise responsibility but also to those who value and depend upon these resources.

The first area for improvement is the extent to which citizens are being included in planning and decision processes. The data suggest that, at least for the attentive public, the agencies are making gains in this area—particularly in the quality of personal interactions with citizens. The public responds best to sincerity, honesty, and genuine effort. However, it would be a mistake to take the level of public agreement in these data tables (simple majorities at best) to mean that planning processes are highly inclusive or that the public participation part of the job is complete. Even among those individuals who pay attention and are actively engaged, many citizens still are not convinced that public deliberation is encouraged.

The second general area for improvement involves procedural functions. These elements often are easier to implement than other more complicated components of public involvement. Some immediate gains can be made in this area by recognizing the importance of these tasks and making them a priority. For example, current and reliable project information is often available; providing timely documents in a clear, understandable format is usually achievable on most forest units. Also, making a commitment to engage citizens early in project discussions seems reasonable as long as agency personnel have a clear idea themselves about what they hope to achieve. And although attendance at public planning sessions may in some cases be an added responsibility, visible participation by decision-makers is an important symbol of organizational commitment and a sign that meeting also is worth citizens' time and that their input is likely to be taken more seriously.

Third is the degree to which public involvement activities on the AMAs are any different from previous attempts and will result in outcomes that are recognizable by the public. An expectation was created in the planning documents, and in many cases by the individual AMA planning teams, that the agencies will be more flexible and more creative in getting projects accomplished. Thus far, as this survey shows, few people could describe what has actually occurred as innovative. Innovation usually involves some risk, but the adaptive management philosophy—as practiced on the AMAs—has not supported a risk-taking environment.¹⁸ The ability to fail and to learn from one’s actions is a principal component of adaptive management. Lee notes that learning from errors and factoring this new information into subsequent attempts is what makes adaptive management truly adaptive.¹⁹ Yet, the findings here suggest that little failure has occurred—probably because few new activities have been implemented—and thus, little learning has been achieved. The upshot of agency efforts thus far is the lack of progress for getting things accomplished “out on the ground” where citizens can see, feel, and react to the results.

The fourth area is probably the major stumbling block for successful public interactions, particularly if responses from resource professionals are any indication. This involves the internal operations of the management agencies and their inability to come to any substantial agreement on what the AMAs are supposed to be. The low level of organizational support for personnel in adaptive management functions is directly related to the lack of results observed by the public and the barriers identified by AMA personnel. Little real progress can be made with citizens—especially those who think local managers are unable to make decisions on their own—until internal problems and politics are resolved in substantive measure. This is an agency-wide dilemma that is not likely to be settled on the individual AMAs.

Notes and References

1. Federal Ecosystem Management Team (FEMAT), *Forest Ecosystem Management: An Ecological, Economic, and Social Assessment* [Portland, OR: U.S. Department of Agriculture, U.S. Department of the Interior (and others)], III-27.
2. B. Barber, *Strong Democracy: Participatory Politics for a New Age* (Berkeley, CA: University of California Press, 1984); W. M. Luch, *The Nationalization of American Politics* (Berkeley, CA: University of California Press, 1987).
3. G. H. Stankey and B. Shindler, *Adaptive Management Areas: Achieving the Promise, Avoiding the Peril* Gen. Tech. Rep. PNW-GTR-394 (Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 1997).
4. B. Shindler and J. Neburka, “Public participation in forest planning: eight attributes of success,” *Journal of Forestry* 91, no. 7 (1997): 17-19.
5. B. Shindler and A. Wright, *Watershed Management in the Central Cascades: A Study of Citizen Knowledge and the Value of Information Sources* (Corvallis: OR, Oregon State University, 2002); B. Shindler and E. Toman, *A Longitudinal Analysis of Fuel Reduction in the Blue Mountains: Public Perspectives on the Use of Prescribed Fire and Mechanical Thinning* (Corvallis, OR: Oregon State University Research Report, 2002).
6. B. Shindler, K. A. Cheek, and G. H. Stankey, *Monitoring and Evaluating Citizen-Agency Interactions: A Framework Developed for Adaptive Management* Gen. Tech. Rep. PNW-GTR-042 (Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 1999).
7. W. E. Shands, “Public involvement, forest planning, and leadership in a community of interests,” in *Proceedings of American Forestry: An Evolving Tradition. Society of American Foresters’ National Convention* (Richmond, VA, 1990), 360-367; R. Lawrence, S. E. Daniels, and G. Stankey, “Procedural justice and public involvement in natural resources decision making,” *Society and Natural Resources* 10, no. 6 (1997): 577-589; B. Shindler and

- K. Aldred-Cheek, "Integrating citizens in adaptive management: a prepositional analysis," *Journal of Conservation Ecology* 3, no. 1 (1999): 13. <<http://www.consecol.org/vol13/iss1/art13>>
8. For example, D. J. Blahna and S. Yonts-Shepard, "Public involvement in resource planning: toward bridging the gap between policy and implementation," *Society and Natural Resources* 2 (1989): 209-227; J. Delli Priscoli and P. Homenuck, "Consulting the publics," in *Integrated Approaches to Resource Planning and Management* ed. R. Lang (City unknown, AB: The Banff Centre School of Management, 1990); J. Wondolleck and S. Yaffee, *Building Bridges Across Agency Boundaries: In Search of Excellence in the U.S. Forest Service. University of Michigan Report* (Ann Arbor, MI, 1994); Shindler and Neburka, "Public participation."
 9. Shindler, Cheek, and Stankey, *Monitoring and Evaluating*.
 10. Shindler, Cheek, and Stankey, *Monitoring and Evaluating*.
 11. H. J. Cortner et al., *Institutional Barriers and Incentives for Ecosystem Management: A Problem Analysis* Gen. Tech. Rep. PNW-GTR-354 (Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 1996).
 12. Shindler and Neburka, "Public participation."
 13. Cortner et al., *Institutional Barriers*.
 14. Delli Priscoli and Homenuck, "Consulting the publics."
 15. Stankey and Shindler, *Adaptive Management Areas*.
 16. Shindler and Toman, *Longitudinal Analysis*; R.L. Williams, "Public knowledge, preferences and involvement in adaptive ecosystem management" (Master's Thesis, Oregon State University, 2001).
 17. K.N. Lee, *Compass and Gyroscope: Integrating Science and Politics for the Environment* (Covelo, CA: Island Press, 1993).
 18. Stankey and Shindler, *Adaptive Management Areas*.
 19. Lee, *Compass and Gyroscope*.