

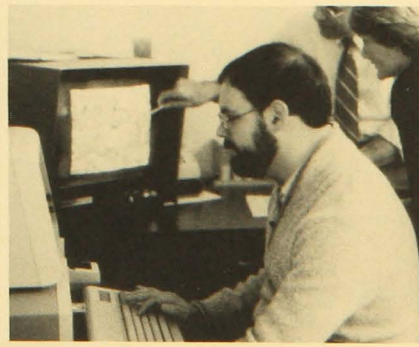
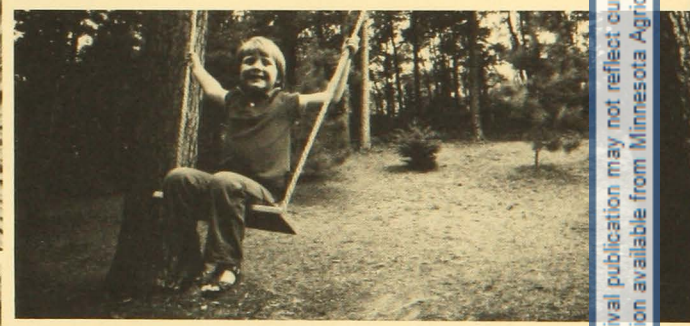
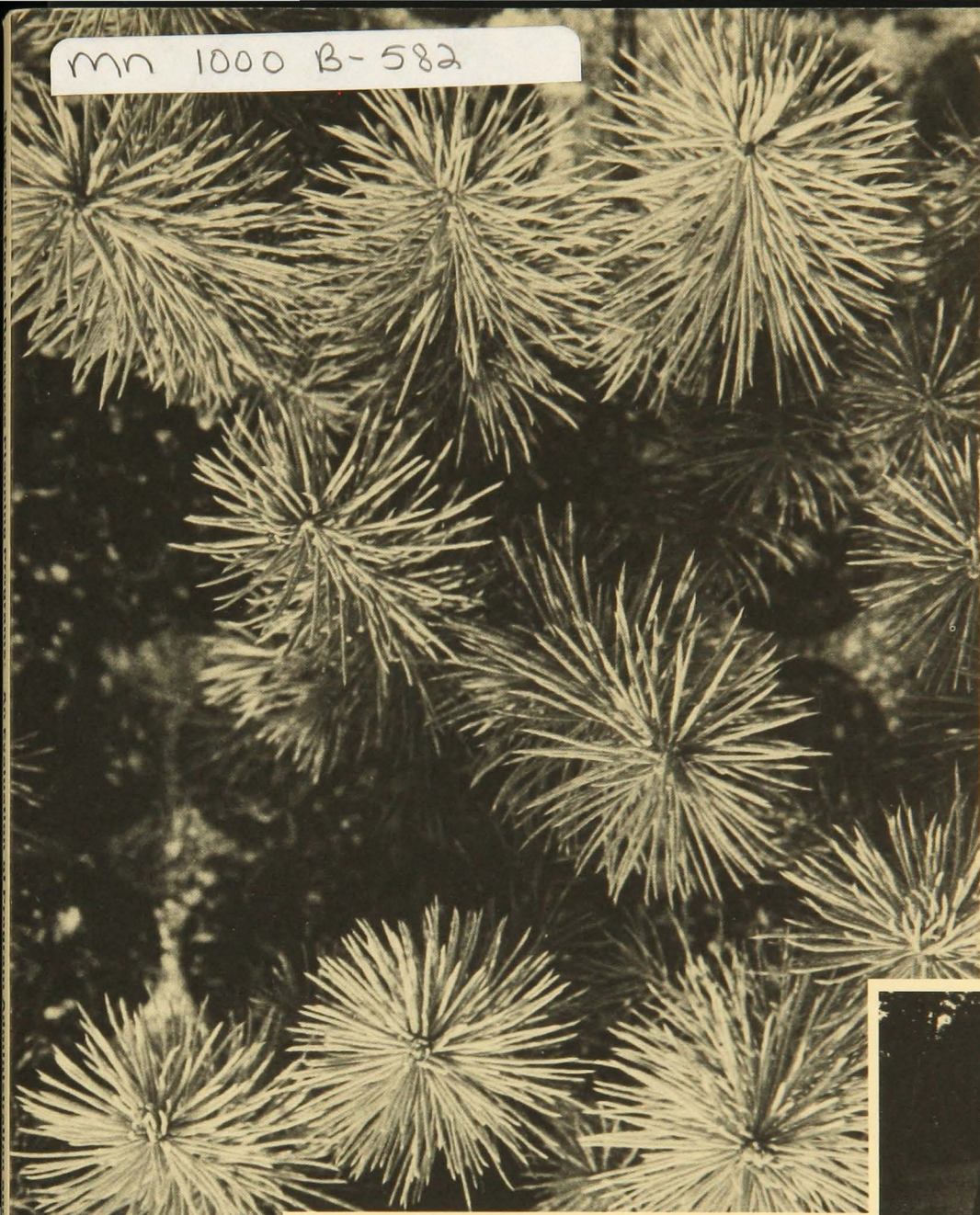
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STATEWIDE FOREST RESOURCE PLANNING PROGRAMS

An Evaluation of Program Administration and Effectiveness

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Statewide Forest Resource Planning Programs: An Evaluation of Program Administration and Effectiveness

Gerald J. Gray and Paul V. Ellefson¹

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University of Minnesota**

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ABSTRACT

First-generation statewide forest resource planning programs are evaluated. The "direct approach to strategic planning evaluation" is used to comprehensively examine the effectiveness of planning programs.

The evaluation involved a mail survey of seven groups perceived to have a stake in forest policy and planning in 48 states (i.e., state forest resource planners, state foresters, administrative officials overseeing state forestry organizations, state budget directors, legislators, forest industry representatives, environmental group representatives). Additional in-depth case studies were done for five states: California, Minnesota, Mississippi, New Hampshire, and Oregon.

Numerous measures of planning effectiveness were identified within four major components of a strategic planning system: context, process, outputs, and performance. Assessments of these measures revealed great diversity in planning environments, processes undertaken, and actual experiences. Survey participants generally perceived first-generation planning programs to have been quite effective--processes were considered to be well-conceived and relatively comprehensive; and many broad benefits, as well as specific accomplishments, were perceived to accrue to state forestry organizations and state forestry communities through planning.

Strategies are recommended for improving the effectiveness of future planning programs. Research implications are also presented, including the need for planning definitions and the opportunity for creating state profiles of planning programs.

CHAPTER I

INTRODUCTION

Statewide forest resource planning programs were prompted by the Cooperative Forestry Assistance Act of 1978 (PL 95-313) and the ensuing availability of federal financial and technical assistance to the states. Two basic purposes of these programs were to develop stronger and more efficient state forestry organizations and to ensure that data for nonfederal forest lands were effectively presented in state and federal natural resource planning programs (e.g., Forest and Rangeland Renewable Resource Planning Act of 1974). Since 1978, such programs have been undertaken in forty-eight states (McCann and Ellefson 1982). A 1985 survey by the Council of State Governments revealed that twenty-nine states have completed and begun implementing their first-generation plans (Cole 1985). Furthermore, a number of states have already begun preparations for the next generation of plans.

Given the stage to which statewide forest resource planning has advanced, questions of effectiveness can and should be raised. How effective have these planning efforts been? Against what criteria can effectiveness be measured? What benefits have resulted from such planning? Have specified goals and objectives been achieved? Did planning programs result in any negative impacts? Which planning activities have been effectively addressed? Have particular planning processes, strategies, or techniques been more effective than others, and if yes, might such actions be transferred to states where planning has been less effective? Substantial investments--more than \$2 million annually--have been made by state and federal governments for statewide forest resource planning programs over the past six years. Yet, little is known about the benefits being provided in return. Identifying such benefits would provide valuable information to state governments contemplating further investments in these programs.

Strategic planning programs are some of the least evaluated, and probably least accountable, activities in most organizations (King 1983). Similarly, statewide forest resource planning programs are probably among the least evaluated activities in state forestry organizations. The primary reason for this is that no well-defined outcome or product exists for evaluating such planning. Defining these planning outcomes would allow state foresters and other state officials to assess the effectiveness of these programs. Rather than being threatening, assessments of this sort could bring greater legitimacy to planning programs and perhaps reduce tendencies to view them as relatively expendable organizational activities.

Earlier surveys and case studies reveal the rich diversity of statewide forest resource planning experiences across the nation (McCann and Ellefson 1982; Cole 1984a, 1984b, 1985). Considerable variation exists not only in administrative environments, planning processes, specified goals and objectives, and strategies developed, but also as to the degree of success achieved in each state. Because these first-generation planning programs were largely intended to be learning experiences, it's important to examine them. Such examinations could reveal information useful to state foresters and planners responsible for the design and administration of future planning programs.

Study Objectives and Scope

The major objectives of this study are to evaluate the effectiveness of statewide forest resource planning programs and to identify strategic actions that could result in greater effectiveness. More specifically, the study:

- o defines measures of planning effectiveness for evaluating statewide forest resource planning programs.

- o evaluates the effectiveness of planning programs nationwide.
- o proposes program and policy options which might enhance the effectiveness of statewide forest resource planning.

This study develops a framework for evaluating all forty-eight planning programs nationwide. It also presents case studies of planning experiences in selected states, to provide a more thorough understanding.

CHAPTER II

METHODS AND PROCEDURES

Before introducing the framework developed for evaluating statewide forest resource planning programs, and the "measures" it defines, this study discusses the problem of "program" definitions, a basic problem confronting evaluations of social programs. It also briefly reviews the relatively limited theory and practice of evaluating strategic planning programs.

Program Definitions

A fundamental problem underlying evaluations of complex, social programs is program definitions (Yin 1984). Even a single program may reveal variations in program definition, depending, for example, on the perspectives of different actors, or on program components that existed before the formal designation of the program. In encouraging the development of statewide forest resource planning programs, State and Private Forestry, USDA Forest Service, has compiled a list of objectives and criteria for states to follow in order to obtain federal assistance (USDA Forest Service 1981). This list describes some of the basic components of planning programs. However, no formal definition of a statewide forest resource planning program has ever been established. A major reason is the great diversity of such programs. They are as diverse as the states themselves, both in magnitude and scope. Planning programs operate within different planning contexts, specify different goals and objectives, and undertake different approaches.

Different levels of planning can be distinguished in statewide forest resource planning programs across the nation. "Strategic" planning involves key actors in state forestry communities at large, while program planning, work planning, and land management planning may be conducted within state forestry organizations. If clear definitions existed, perhaps each planning level could be evaluated individually. However, states do not consistently differentiate between planning levels. As a result, "statewide forest resource planning" refers to all four planning levels in some states, but to only one or two planning levels in others.

Strategic Planning Evaluation

In order to define measures of planning effectiveness and develop a framework for evaluating statewide forest resource planning programs, literature on strategic planning was reviewed. Although formal strategic planning has risen to prominence among private and public organizations over the last few decades, little evidence exists that such planning has been effective or resulted in outcomes superior to those which might have resulted from informal planning or no planning at all. Proponents generally claim that in addition to improving organizational performance, strategic planning provides a wide variety of other benefits including: agreement on goals and objectives, increased and shared commitment, improved coordination and consistency among programs, enhanced communication and information flow.

Despite a general consensus in traditional management literature that formal strategic planning is an essential element of success, critics continue to question its value. Some argue that the rational, comprehensive process of strategic planning represents little more than an "illusion of control," especially when complex social systems are involved (Hogarth and Makridakis 1981). They maintain that decisions reached through such planning are no better than those reached through an adaptive, muddling-through process (Wildavsky 1973). Bresser and Bishop (1983) further contend that strategic planning might entail dysfunctional effects in some organizations, leading to poorer performance.

Empirical evidence relating formal strategic planning to organizational performance is both limited and inconclusive. Bresser and Bishop (1983) find that several case studies reveal positive relationships between strategic planning and organizational performance while several others reveal either no relationship or a negative relationship. Armstrong (1982), after reviewing all existing case studies, concludes that formal strategic planning does appear to have value. However, he also observes several significant limitations in these case studies: most of them (60 percent) lack sufficient information to describe the planning processes involved; even more (70 percent) lack sufficient information to describe the context in which planning was undertaken; and the vast majority (80 percent) examine only financial criteria (e.g., profitability, growth) as measures of effectiveness, failing to recognize the interests of multiple constituent groups.

In sum, evidence concerning the value of strategic planning is conflicting. Literature reviews generally agree, however, that most existing case studies are severely flawed, especially with respect to assessing planning contexts and processes (Hogarth and Makridakis 1981; King 1983; Nutt 1984).

All but one of the case studies reviewed by Armstrong (1982) employed nonexperimental approaches to strategic planning evaluation, implicitly recognizing the fact that such planning do not lend themselves to scientific research methods (Edwards, Guttentag, and Snapper 1975). Newer theoretic approaches are also nonexperimental in design (Edwards, et al. 1975; King 1983; Nutt 1984). A major problem with planning evaluation is that no single approach has yet gained widespread approval.

The Direct Approach

King (1983) has developed an approach to strategic planning evaluation referred to as the direct approach, in contrast to the indirect approach. Proponents of the indirect approach argue that organizational performance, commonly measured by profitability or growth, is the ultimate objective of planning and therefore should be the standard by which it is evaluated. King counters, however, that the indirect approach does not provide operationally useful results to management, but rather treats planning as a "black box" by assessing it solely in terms of the organization's ultimate performance.

The direct approach assesses planning in a detailed and comprehensive manner. Because planning is often advocated for a wide variety of potential benefits, accruing to multiple stakeholders, the basic principle of this approach is that a fair evaluation should assess the degree to which each of these diverse benefits is actually achieved. Four fundamental precepts underlie the approach:

- o Multiple assessments of various elements of planning should be made. Because any single measure of effectiveness is problematic, no attempt should be made to synthesize these assessments into one measure.

- o Multiple stakeholders should be assessed. Since planning in any complex social system serves a number of constituent groups, both within and outside the organization, an evaluation must assess effectiveness in terms of the values of each.
- o Internal and external criteria should be used as measures. Evaluations should use internal criteria to assess a planning program in terms of the specific objectives for which it was designed, and external criteria to assess a planning program in terms of how well it performed relative to other planning programs. External criteria may be considered universal and common across all the programs.
- o Subjective and objective assessments should be used. Assessments should include the collection of objective data as well as the use of subjective judgement.

The direct approach identifies major components of a strategic planning system, within which various elements can be assessed (Appendix A). Several of these "criteria" elements have actually been assessed through previous evaluations, although this comprehensive framework has never been applied.

A Framework For Evaluation

This study adopted the direct approach as a basic framework, because its comprehensiveness approach to strategic planning evaluation is particularly suited to the study's objectives. Certain modifications were necessary, due to the magnitude and nature of the forestry planning activities being evaluated. External assessment criteria were used much more frequently than internal, far more subjective data was collected than objective, and not all assessment elements were included.

Figure 1 presents the model used to evaluate statewide forest resource planning programs. It includes four basic components of a strategic planning system within which a number of assessment elements are defined: context, process, outputs, and performance. Most assessment elements represent external criteria which are common to all programs. They are the basic measures by which program effectiveness is evaluated.

Context

Planning context is the first component of the strategic planning system. Elements of planning context describe the diverse environments within which forest resource planning programs are conducted. They are:

- o Character of Forest Resources
Characteristics of the forest resources (e.g., total forest land, state-owned forest land, annual timber growth).
- o Character of State Forestry Organizations
Administrative location and total budget of state forestry organizations.
- o Previous Planning Culture
Prior experience with planning in state forestry organization.
- o Initial Planning Purposes
Initial purposes for which planning was undertaken.

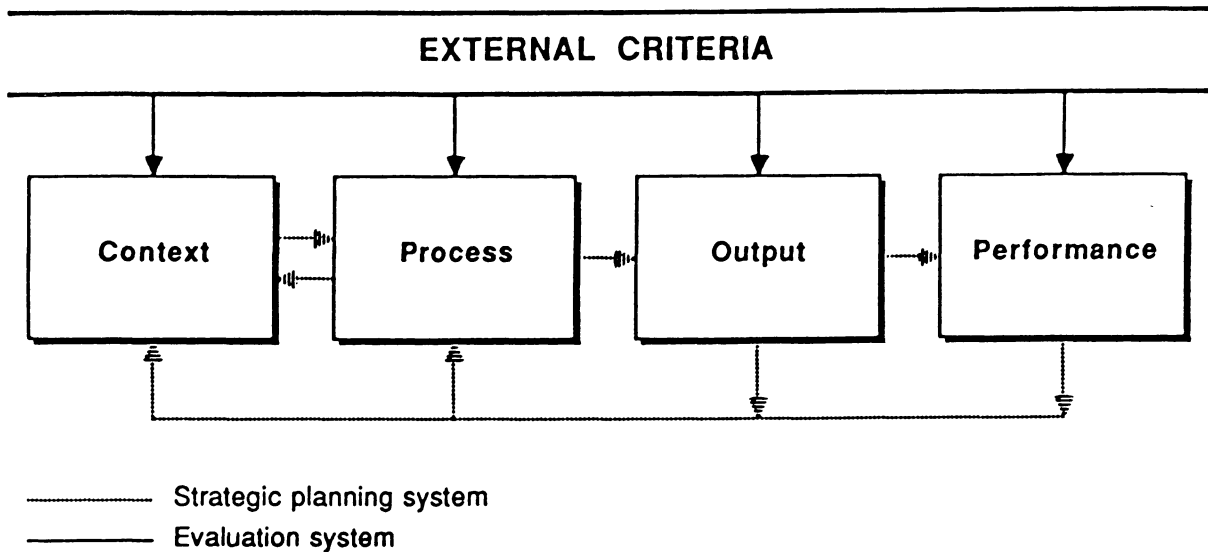


Figure 1. The Direct Approach to Evaluating Statewide Forest Resource Planning Programs.

- o Resources Available for Planning
Planning budgets (i.e., state and federal funding), staffs, and staff-time allocations.
- o Time Available for Planning
Time available, or required, for planning.
- o Technical Complexity of Planning
Technical complexity involved in planning and technical skill available for planning.
- o Political Support for Planning
Political support for planning by key individuals and groups

Process

Planning process is the second component of the strategic planning system. Process elements are used to characterize the planning process conducted in each state. These elements have been identified from planning literature and by state forest resource planners (USDA Forest Service 1985):

- o Mission Definition
Clearly-defined mission for the state forestry organization.
- o Internal Assessment
Assessment of roles, responsibilities, and structure of state forestry organization.
- o External Assessment
Assessment of social, demographic, economic, and technological trends.

- o Forest Resource Assessment
Assessment of forest resources, in terms of supply and demand.
- o Issue Identification
Identification of important forestry issues.
- o Goal Development
Development of goals for forestry programs.
- o Public Involvement
Involvement of state and federal agencies, private groups, and individuals with interests in forestry.
- o Multiple Resource Assessment
Assessment of use and management of multiple forest resources (e.g., timber, wildlife, recreation, water).
- o Contribution of Various Ownerships
Assessment of potential contributions of state, federal, and private ownerships.
- o Alternative Strategy Development
Development of alternative strategies.
- o Strategy Evaluation and Selection
Strategy selection through fair evaluation of alternatives.
- o Planning and Budgeting Link
Development of link between planning and budgeting processes.
- o Implementation, Monitoring, and Evaluation
Development of implementation, monitoring, and evaluation strategies.

Outputs

Planning outputs (i.e., outcomes or products) comprise the third component of the strategic planning system. It consists of benefits that may be realized through planning programs. McCann and Ellefson (1982), Cole (1982), and Ellefson (1984) have contributed to this list of planning benefits:

- o Long-Term Direction
A clearer sense of long-term direction in the state forestry organization.
- o Decision-Making Processes
More efficient decision-making processes in the state forestry organization.
- o Program Compatibility
An increased sense of program compatibility in the state forestry organization.
- o Anticipation and Response
An improved ability in the state forestry organization to respond to opportunities and problems.

- o Authority, Accountability, and Control
An improved system of authority, accountability, and control in the state forestry organization.
- o Public Awareness
More effective means of raising the awareness of the general public with respect to forestry issues.
- o Policy-Maker Awareness
More effective means of raising the awareness of policy-makers with respect to forestry issues.
- o Political Support
Increased political support for forestry programs, resulting in higher forestry budgets.
- o Communication and Coordination
Improved communication and coordination between federal, state, and local natural resource organizations.

Performance

The fourth component of a strategic planning system is performance. Included in this component are several broad elements which reflect how well planning programs have performed relative to expectations:

- o Importance of Planning
The importance of statewide forest resource planning programs to interests of forestry in state.
- o Purpose Fulfillment
Fulfillment of initial purposes for undertaking planning.
- o Process Satisfaction
Satisfaction with the process used for planning.
- o Satisfaction with Goals, Objectives, and Strategies
Satisfaction with the goals, objectives, and strategies developed through planning.
- o Adoption and Use
Use of the plan when making strategic decisions related to forestry.
- o Progress Toward Implementation
Progress toward achieving goals and objectives specified in plan.

Study Procedures

This study was a mail survey of multiple respondents in each of the 48 states with statewide forest resource planning programs.¹ It also included case studies involving personal interviews

¹ West Virginia and Idaho were not included since their statewide forest resource planning programs were not active during the survey.

in 5 selected states. Results of the nationwide survey were emphasized, with case studies providing additional insight and help in interpreting survey results.

Nationwide Mail Survey

The survey involved seven respondent groups in each of the 48 states with statewide forest resource planning programs. Respondent groups include:

- o state forest resource planners
- o state foresters
- o administrative officials overseeing state forestry organizations (e.g., assistant commissioner of state department of natural resources)
- o state budget directors
- o legislators
- o forest industry representatives
- o environmental group representatives

Telephone conversations with forest resource planners in each state were used to identify or verify appropriate respondents. The intent was to select individuals who were knowledgeable about statewide forest resource planning. In some states, respondent group classifications were not applicable, or appropriate individuals could not be identified. A total of 316 questionnaires were subsequently mailed.

Survey design and technique followed the Dillman approach (Dillman 1978), modified to account for the large number of respondents who were state officials (Sudman 1985). Individual survey forms were designed for each respondent group, in recognition of their varying degrees of knowledge about statewide forest resource planning (Appendix B-1). A large proportion of the questions were common to all survey forms, allowing for comparisons between groups.

Three separate mailings were made in a six weeks period: a complete mailing (i.e., cover letter, survey form, and stamped, self-addressed envelope), a postcard two weeks later, and another complete mailing four weeks after the postcard (Appendix B-2). Four weeks after the initial mailing, telephone calls were made to nonresponding state forest resource planners and state foresters.

Sponsorship was considered extremely important to the survey's success. Support by four major organizations was emphasized in cover letters and on survey forms. These organizations were the National Association of State Foresters; the Northeastern Forest Resource Planners Association; State and Private Forestry, USDA Forest Service; and the Department of Forest Resources, University of Minnesota.

State Case Studies

Five statewide forest resource planning programs were chosen as case studies using a number of selection criteria (Appendix C-1). The programs chosen were in California, Minnesota, Mississippi, New Hampshire, and Oregon. Their primary purposes were to help interpret and

verify survey responses, and to enhance insight into diverse planning contexts and processes. Personal interviews for each state were conducted with various state officials and other individuals. More people were interviewed than were asked to respond to the mail survey (Appendix C-2).

Data Quality and Interpretation

Response rates for the nationwide mail survey were very strong (Appendix D-1). Of the 316 surveys mailed, 216 were usable returns (68 percent). Regional responses were relatively similar: 67 percent in the Northeast, 64 percent in the Southeast, and 74 percent in the West. State forest resource planners had the highest response rate (94 percent), followed by forest industry representatives (73 percent), administrative officials of forestry agencies (70 percent), state budget directors (69 percent), state foresters (63 percent), environmental group representatives (60 percent), and legislators (52 percent).

In interpreting survey returns, "not sure" responses were considered valid and usable (20 percent of all responses were "not sure"). Such responses represent returns in which respondents stated their knowledge was too limited to complete the survey questionnaire. These returns were included since they reflect important planning information. For example, "not sure" responses reveal that a considerable number of individuals (e.g., state budget directors, legislators, and forest industry representatives) were uninformed about statewide forest resource planning programs, though they had substantial interest in such programs. Although such information is important, the inclusion of "not sure" responses skews certain response rates. For example, forest industry officials have the second highest response rate, but a significant portion are "not sure" responses.

Like most planning evaluations, a nonexperimental research design was used (Armstrong 1982). Relatively small, selected samples were surveyed to gather largely qualitative data on planning effectiveness. The research design was intended primarily for exploring hypotheses and for developing a greater understanding, or an improved theory, of statewide forest resource planning (Yin 1984). Data analysis generally involved the examination of simple statistics (e.g., frequencies, percentages) and cross tabulation tables.

Most of the information collected by the survey was subjective respondent perceptions. Objective data (e.g., planning budgets, staff levels, time requirements) were collected to verify certain subjective data, in order to enhance the survey's reliability. The study found some 1981 and 1985 statewide forest resource planning budgets which were substantially different than had been reported in earlier surveys (McCann and Ellefson 1982; Cole 1985). The differences might be due to varying respondent perceptions of which budgets, or portions thereof, should be allocated to state forest resource planning programs.

Because samples within states are relatively small, generally data was aggregated and discussed in terms of the nation, broad regions, or respondent groups. State profiles of forest resource planning programs could be created, however, to show respondent perceptions with respect to each assessment element (Appendix J-1). Such applications could involve a greater number of respondents and assess more internal criteria. One particularly important group that should be included in future studies are field people in state forestry organizations. This would allow for assessing whether goals and objectives of statewide forest resource planning programs are recognized at the further reaches of such organizations.

CHAPTER III

CONTEXT OF STATEWIDE FOREST RESOURCE PLANNING

The context of statewide forest resource planning programs is generally considered critical for the success of such programs. Planning models place various degrees of significance on context. Some portray it as the ultimate determinant of planning success. Others present it as a major, but not necessarily paramount factor (Bryson 1985). Despite its importance, context has been overlooked in nearly all planning evaluations conducted to date (Armstrong 1982). Evaluations that have assessed context have done so in a summary fashion, describing only a few major situational variables (Nutt 1984).

Character of Forest Resources

Data was collected on a number of context elements reflecting the character of forest resources in each state. These elements include:

- o total forest land
- o commercial forest land
- o state commercial forest land
- o federal commercial forest land
- o forest industry commercial forest land
- o nonindustrial private forest land
- o annual timber growth
- o potential annual timber growth
- o value-added by timber activities

Great variability with respect to these elements suggests that statewide forest resource planning programs must be very diverse (Appendix E). Certain elements might also help explain differences between planning programs. For example, the amount of state, federal, or private commercial forest land might be related to the size of a planning program. Since budget size is the most recognizable difference in programs, each context element was cross tabulated with statewide forest resource planning budgets. No significant relationships were found, suggesting that forest resource characteristics do not, by themselves, determine the size of planning programs.

Character of State Forestry Organizations

Although some statewide forest resource planning programs are undertaken by the forestry community at large, state forestry organizations usually have the authority to conduct such programs. Even when state forestry organizations are not directly responsible, they still have a major role in implementing planning programs. The character of these organizations can have a significant impact on the success of statewide forest resource planning programs. Organizational characteristics (e.g., size, complexity, jurisdiction, existing relationships with other state and federal agencies) can either create barriers to planning, or facilitate such efforts.

Most state forestry organizations are functional divisions within state departments of natural resources, conservation, or environmental protection (McCann and Ellefson 1982). However, a number of states, mostly located in the southern U.S., have independent forestry commissions consisting of appointed representatives from various segments of the public and private sectors, with the state forester providing leadership. Due to the social and economic importance of forestry, some states have executive-level forestry departments.

Besides having to adapt to the existing character of state forestry organizations, statewide forest resource planning programs also have to react to the dynamic nature of such organizations. New Jersey's State Forest Resource Planner noted the problem:

"The Bureau had a drastic policy change and reorganization in 1982, almost at the end of our state forest resource planning process.... We then contracted to revise the plan to reflect our policies in 1983, and during that period we reorganized again. When the document was finally revised and printed in 1983, it was already out of date because of the policy changes."

Organizational change can also be positive, creating a more favorable environment for state forest resource planning. In Virginia, for example, the Division of Forestry within the Department of Conservation and Historic Resources was reorganized and elevated to an executive-level department. This change occurred largely because planning documents revealed the economic importance of forestry to the state. It enhanced the position of the planning program as well as the forestry organization.

Table 1. Total Budgets for State Forestry Organizations, 1985, 1983, 1981.

Year	Range (\$million)	Median (\$million)
1985	1 - 268	7.5
1983	1 - 192	6.3
1981	1 - 186	4.5

A key characteristic differentiating state forestry organizations is the size of their budgets (Table 1). Budget ranges reveal great diversity in the size of state forestry organizations. Significant increases in median budgets between 1981 and 1985 (more than 16 percent per year) suggest growing support for forestry programs, which may be attributable to the advent of statewide forest resource planning programs. Such rapid growth certainly reflects an increasing need for the improved management and more efficient resource allocation which could result from planning.

Potential relationships between budgets for state forestry organizations and statewide forest resource planning programs were examined. No significant relationships existed. This reveals that the size of a state forestry organization did not determine the size of a state's investment in planning.

Previous Planning Culture

A state forestry organization's previous experience with planning can have important implications for the potential success of statewide forest resource planning programs. An organization with little planning experience, or a history of failed planning programs, might be a particularly difficult environment for a new planning program. Similarly, an organization with long planning experience, or a history of successful programs, might provide an especially favorable environment.

Examples showing very different pre-existing planning cultures can be drawn from the case studies. Before 1980, Mississippi's Forestry Commission had limited experience with planning, as noted by their State Forest Resource Planner:

"Prior to 1980 the Forestry Commission had separate plans for separate programs, passed down from the top; these were not very well coordinated.... In July 1980, Dick Allen came in as State Forester. The Commission was in the doldrums. Allen was big on planning, so we did some research and came up with a work-planning-by-county system.... Allen said we also needed a longer-term plan, which is how our 5-Year Operational Plan was developed. He was also considering a 20-year plan, but we did not actually prepare one.... In 1983, Sid Moss became State Forester and instituted the Pathways planning effort--which is the kind of plan Dick Allen had been considering."

Mississippi's Forestry Commission presented a difficult environment in which to foster planning. The planning program continues to struggle for acceptance within the organization, but strong leadership by two State Foresters, and the presence of a highly respected planner within the Commission, have led to considerable success.

New Hampshire has a long history of citizen participation, reflected in the tradition of town meetings. The state's forestry community, of which the relatively small Division of Forests and Lands is a member, has nearly 35 years of experience with forest planning, as noted by the former State Forester:

"There have been two community forest planning efforts prior to this one. The first, in 1952, focused primarily on timber production and fire protection. The second, in 1964, was somewhat broader, although still much narrower than the current effort. There is broad acceptance of planning in New Hampshire's forestry community; it is expected about every ten years."

Table 2. Existence and Use of Prior Goals and Strategies in State Forestry Organizations.

	Forest Planners (%)	State Foresters (%)
Existence		
Yes	59	72
No	41	28
Use		
Often	28	32
Sometimes	52	46
Seldom	14	14
Never	3	0
Not Sure	3	9

The favorable environment for statewide forest resource planning in New Hampshire has certainly had positive effects on program. This does not mean that problems did not arise during planning. It merely suggests that acceptance and cooperation have probably been easier to obtain for new planning efforts as a result of past planning experience.

The existence and use of planning goals and strategies in state forestry organizations prior to the start of statewide forest resource planning programs was examined (Table 2). Both planners and state foresters agreed that a high proportion of their state forestry organizations had established goals and strategies prior to the outset of statewide forest resource planning, and that such goals and strategies were used fairly regularly. This suggested that most state

forestry organizations had at least some prior planning direction to follow. In most cases, however, such direction was limited to broad policy statements.

More than 70 percent of the prior goals and strategies cited by forest resource planners and state foresters were contained in state law or agency policies, which often are quite general in nature. Only 20 percent of the state forestry organizations had long-range plans likely to be more specific on goals and strategies. A greater proportion of state foresters than planners perceived the existence of prior goals and strategies. This suggested that the direction provided by such goals and strategies may have been very broad, since state foresters tend to be more policy-oriented.

Initial Planning Purposes

Because states originated statewide forest resource planning with different purposes in mind, such programs should be assessed according to their own objectives. Initial planning purposes were assessed using several purposes identified by McCann and Ellefson (1982). Establishing long-term agency direction was the most commonly recognized planning purpose. This was followed by: increasing legislative and public understanding, justifying budget allocations to forestry programs, and fulfilling federal grant requirements (Table 3).

Table 3. Perceptions of Initial Planning Purposes.

	<u>Frequency</u>
Establish clearer sense of long-term agency direction	132
Increase legislative and public understanding of forestry	106
Justify budget allocations to forestry programs	72
Fulfill federal grant requirements	65
Other	15

Other purposes cited by respondents and in examples from case studies, again reveal diversity in planning programs. In some states, the primary purpose of planning was to identify statewide issues and provide pertinent information for policy-makers. California may have the most extreme example of the degree to which a planning program, its Forest and Range Resource Assessment Program (FRRAP), focused on this purpose. A quote by the supervisor of the planning program illustrates this focus:

"The key to FRRAP is strategic issue identification for policy-makers (i.e., the Board of Forestry); the major objective of the forthcoming assessment is to place forestry issues on the political agenda.... After the assessment is finished, we hope to incorporate the information into internal planning for the Department, but we're still in the thinking stage on this. We have no planning mandate, only an assessment mandate. Therefore we do not need to integrate broad policy with internal planning."

In many other states, resource assessment and issue identification were perceived as important parts of planning, but producing a statewide plan with objectives and strategies was the ultimate objective. Statewide forest resource planning programs in New Hampshire, Mississippi, and Minnesota, for example, all focused on producing a plan more than an assessment.

Furthermore, these programs attempted to link statewide planning and internal planning. Minnesota's effort was the most significant in this respect. They produced program, work, and unit plans (i.e., land management plans) consistent with the statewide plan.

Some states gave little emphasis to resource assessment, issue identification, and statewide planning, preferring to focus instead on planning within the state forestry organization. Montana's program is one example, as noted by their State Forest Resource Planner:

"To reiterate, after a relatively unsuccessful experience in developing a statewide SFRP (published in 1980), we are now successfully using an internal planning process tied to our biennial budgeting process."

Although a fair evaluation should assess all programs according to their own purposes, accurately identifying such purposes presents difficulties. Respondents in the same state may perceive different purposes. For example, the State Forest Resource Planner in Pennsylvania recognized two primary planning purposes:

- o fulfilling federal grant requirements
- o establishing long-term agency direction.

In contrast, a Pennsylvania forest industry representative recognized three different primary purposes:

- o justifying budget allocations to forestry programs
- o increasing legislative and public understanding
- o justifying forest products industry expansion--creating more jobs.

Planning purposes may also be dynamic, as noted by New York's State Forester:

"The initial purpose of undertaking the planning process in this state was solely to meet federal grant requirements. Today, however, based on nearly six years of effort, I would also indicate the other purposes as the real reasons for undertaking this activity."

And, finally, such purposes may be vague, as revealed in comments by an environmental group representative in Maine:

"One of the weaknesses of forest planning in Maine is that clear purposes, goals, and objectives have not been articulated."

Resources Available For Planning

Resources available for planning are critical elements of the context in which statewide forest resource planning programs are undertaken. Budget levels and staff sizes can represent either constraints within which programs must operate or opportunities for exploration and innovation with respect to planning techniques.

Great diversity exists in the size of planning programs, as revealed by the range of total planning budgets (Table 4).

Table 4. Total Planning Budgets, Federal Funding, and State Funding, 1985, 1983, 1981.

	Year	Range	Median
Total Budget	1985	\$2,000 - \$450,000	\$20,000
	1983	4,000 - 420,000	32,000
	1981	5,000 - 405,000	40,000
Federal Funding	1985	\$1,000 - \$ 75,000	\$ 8,000
	1983	1,000 - 100,000	16,000
	1981	1,000 - 123,000	20,000
State Funding	1985	\$1,000 - \$450,000	\$10,000
	1983	1,000 - 408,000	17,000
	1981	2,000 - 382,000	20,000

Levels of federal and state funding for planning programs also vary significantly. The ranges for both total planning budgets and state funding increased between 1981 and 1985, suggesting that financial support for planning grew in some states. However, financial support for planning nationwide diminished significantly. The medians for total planning budgets, federal funding, and state funding all decreased by about 50 percent during this period.

Trends for planning staffs were consistent with trends for planning budgets during the 1981-1985 period. In 1981, more than 75 percent of the statewide forest resource planning programs had at least one full-time planner. By 1985 this was the case in fewer than half the programs. Planning staff time allocated to direct planning activities also dropped considerably during this period. While first-generation planning programs were in progress, 85 percent of the programs allocated at least half of their planning staff time to direct planning activities. After completing the first-generation plans, only 23 percent of the programs allocated half or more of their staff time to direct planning activities.

General interpretations of budget and staff data are difficult within the varying experiences of the states. In some, budgets and staffs were reduced as first-generation plans neared completion (e.g., Louisiana, South Dakota). In other's, program budgets and staffs continued to grow during and after first-generation planning. Three case-study states displayed such growth, but for differing reasons. Minnesota's program expanded as statewide planning was completed and unit planning undertaken; Oregon's program expanded as activities needed to monitor federal natural resource planning programs increased; and California's program expanded as demands for better resource information increased.

To evaluate statewide forest resource planning programs fairly, especially with respect to budget and staff sizes, differences in the activities undertaken by such programs must be taken into account. A comment by Minnesota's State Forest Resource Planning Supervisor reflects this concern:

"Comparing staff-sizes in states that do significant substate planning (e.g., area planning, recreation planning, etc.) to those states that only do statewide planning is invalid and may lead to erroneous, perhaps harmful, results."

A number of potential relationships were examined to see whether statewide forest resource planning budgets can be explained by particular forest resource characteristics, or by the size of state forestry organization budgets. In general, planning budget levels were not well explained by any of the variables considered. Budgets appeared to depend on combinations of variables unique to each state, and on other factors such as planning purposes, administrative locations, and political support for planning programs.

Perceptions of Budget Adequacy

Beyond evaluating objective data, perceptions of state forest resource planners and state foresters were assessed, with respect to the adequacy of planning budgets. More than two-thirds of all planners and state foresters perceived planning budgets as having been adequate to meet planning objectives (Appendix F-1). Budget adequacy is, admittedly, very subjective. It reflects a respondent's expectations of a planning program. Michigan's State Forester noted that budgets were adequate for general planning purposes, although there were many more detailed matters that planning could have addressed:

"Adequate for a plan to paint a centerline on roads, not to trim every bush along the roadside."

Relationships between perceptions of budget adequacy and the actual size of planning budgets were examined. The fact that no significant relationships were discovered suggests that perceptions of budget adequacy reflect not only budget size, but also expectations of a specific planning program.

Time Available For Planning

Time available for statewide forest resource planning programs can be a scarce resource. If sufficient time is not available, a program faces constraints that may hinder potential effectiveness. In contrast, a planning program that requires too much time may appear inefficient or floundering. Considered here was the amount of time required to complete first-generation statewide forest resource plans.

More than 75 percent of the states started first-generation statewide forest resource planning programs in the period 1977-1980. Nearly the same percentage completed initial plans in the period 1983-1986 (Appendix E). The time required for first-generation planning programs ranged from one to nine years, with a median of four years. Time required for planning varied little between regions; the median for programs in the Northeast and Southeast was five years. In the West it was three years.

Time required for first-generation statewide forest resource plans is another apparently objective variable that in fact involves subjective judgement by respondents. In some states, statewide forest resource planning programs similar to those proposed in the late 1970's by State and Private Forestry, USDA Forest Service, were begun at an earlier date. For example, Oregon began a state forest planning program in 1969, and is now working on its third-generation plan, due in 1987. In several other states initial planning programs foundered and had to be redesigned or restructured (e.g., Alaska, Montana, Utah). And in at least one state, the first-generation plan has yet to be finished due to lack of commitment (South Dakota). Time requirements in each of these programs, and in many others, are difficult to accurately assess.

Perceptions of Time Adequacy

More than 80 percent of all state forest resource planners and state foresters perceived the amount of time available for initial planning efforts as adequate (Appendix F-1). This suggests that time did not present a significant planning constraint. Examinations revealed that actual time requirements for first-generation plans and perceptions of time-adequacy are independent of one another. One year might be perceived as adequate in one state while nine years might be inadequate in another state. Once again, resource requirements seem to be specific to the design and objectives of each planning program.

Relative Planning Periods

By starting first-generation planning programs late, relative to other states, a number of states may have benefited from the earlier experiences of others. Several state forest resource planners acknowledged borrowing planning strategies and tactics from other state programs. However, there is no evidence that later planning programs have been more effective than earlier programs. Because each state faces a unique planning context, strategies and tactics borrowed from other states might be of limited use. Nevertheless, at an early stage in developing statewide forest resource planning programs, the learning curve is very steep, and the capacity to learn is great. If strategic planning actions are transferable, the benefits of borrowing from earlier planning experiences may be significant.

Technical Complexity of Planning

Some statewide forest resource planning programs are more technically complex than others, with more demanding approaches to collecting and analyzing data, identifying issues and goals, or developing and implementing strategies. Technical complexity may have detrimental effects on planning programs, yet may also be necessary for program credibility.

State forest resource planners and state foresters did not perceive first-generation planning programs as involving much technical complexity. Only 18 percent of the planners and 30 percent of the state foresters considered planning efforts to have been complex (Appendix F-1). In conjunction with low complexity, more than 80 percent of all planners and state foresters perceived the amount of technical skill on, or available to planning staffs as being adequate for planning objectives (Appendix F-1). Some states had adequate technical skill on their planning staffs while others received assistance from State and Private Forestry, USDA Forest Service, or from cooperating universities.

An important relationship was found between technical complexity and the adequacy of available technical skill. For both state forest resource planners and state foresters, perceptions of high technical complexity were related to very adequate technical skill. Perceptions of low complexity were related to inadequate technical skill. This suggests that statewide forest resource planning programs generally adopted a degree of technical complexity consistent with the level of technical skill available.

Relationships between technical complexity and planning performance measures were also examined. Higher degrees of technical complexity were generally found associated with perceptions of higher performance. This implies that more sophisticated analytical methods and planning techniques may improve the perceived effectiveness of many second-generation planning programs.

Political Support for Planning

The support of key planning constituents is an essential element of statewide forest resource planning. Key constituents identified here are the governor, legislature, state forester, state agencies other than state forestry organizations, federal agencies, forest industries, and other private interests. The degree to which each of these constituents supports planning programs is assessed, at both the outset and the completion of first-generation plans (Appendix F-2).

The varied contexts of planning programs and the dynamic nature of leadership present difficulties for assessing political support. Some programs involve broad political support, while others require the support of only a few key leaders. Statewide forest resource planning programs in New Hampshire and Mississippi, for example, received considerable support from the governor, legislature, state forester, the USDA Forest Service, forest industries, and other private interests; California's program relied primarily on support from small numbers of legislators, and individuals on the Board of Forestry; and Oregon's program originated almost exclusively through the efforts of the State Forester and Board of Forestry.

The degree of support for planning programs can also shift with changes in political leadership. Over the eight-year period assessed, many states experienced changes in governors, legislative leaders, and state foresters. In a number of states, support for planning was significantly altered due to such changes.

Governors, legislatures, other state agencies, forest industries, and other private interests were perceived to have given little support to planning at the outset, while state foresters and federal agencies were perceived to have given strong support (Figure 2). For each constituent group perceived to have given low support initially, the level of support increased significantly by the end of the first-generation plan. This suggested that statewide forest resource planning programs had considerable success in gaining the interest and backing of key constituents, even though many such constituents showed little interest when such programs began. Support of state foresters and federal agencies from start to completion was perceived to increase less than other constituent groups. This, however, was not surprising since their support was very strong at the outset.

Regional Differences in Political Support

A number of significant regional differences were identified with respect to political support for statewide forest resource planning programs (Appendix F-3). Support of key constituent groups was perceived to have been relatively consistent across all regions at the outset of planning, except for the support of forest industries and other private interests. In the West, these groups appeared to have given significantly less support to planning than in the Northeast or Southeast. This was surprising in view of the social and economic significance of forest resources in the West. However, there were several possible explanations: forest industries and other private interests in the West might have been preoccupied with federal natural resource planning programs (e.g., national forest planning); forest industries, in particular, might have perceived state planning programs as increasing the threat of further forest practice regulation; or planning programs in the West may not have provided sufficient opportunity for forest industries and other private interests to become involved.

The most significant regional differences in political support by key constituent groups are evident in the changes in support from start to completion of first-generation planning programs. Support by legislatures, other state agencies, and other private interests was perceived to have increased significantly more in the Northeast than in the Southeast and West.

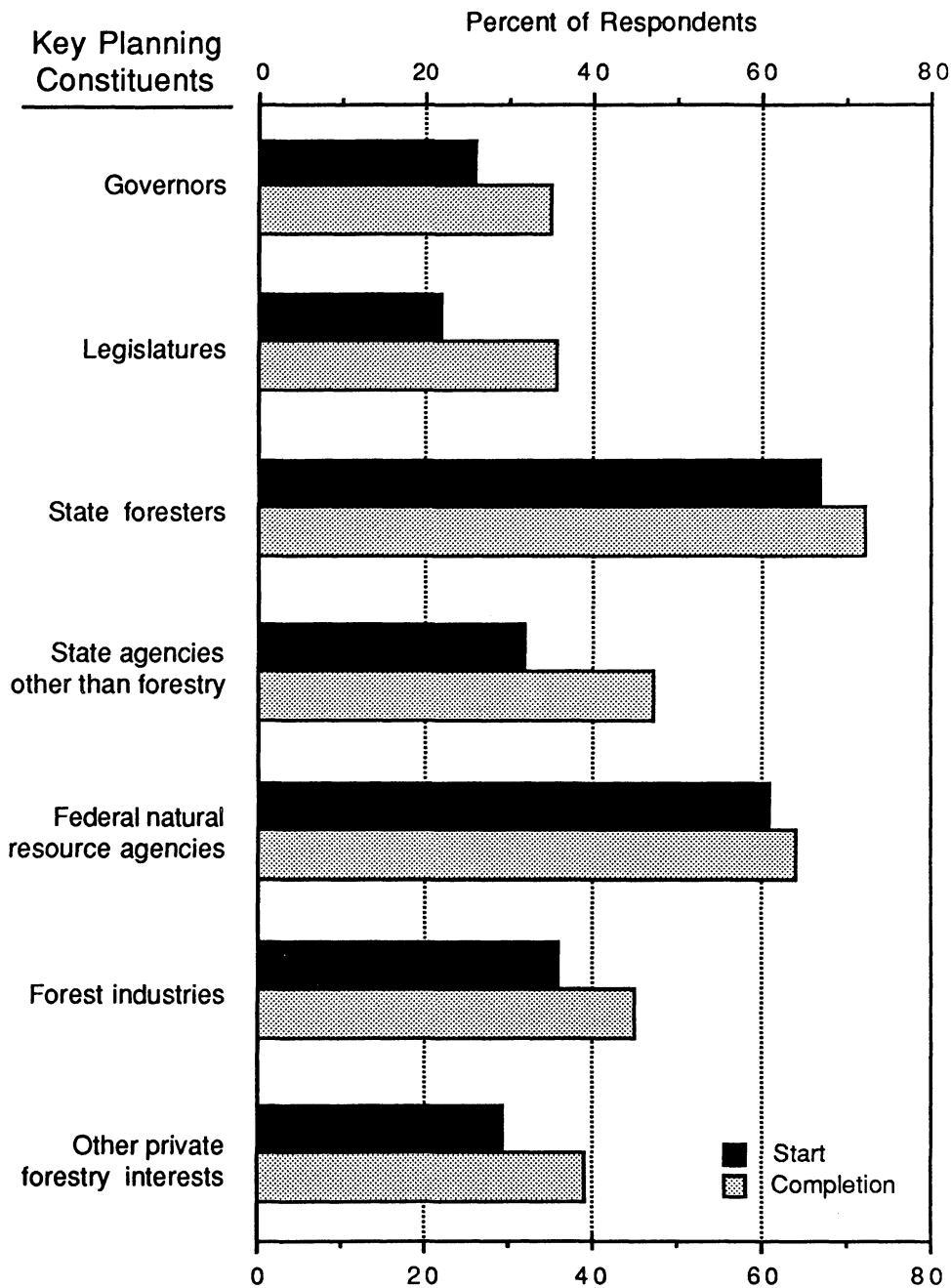


Figure 2. Respondent Perceptions of Whether Key Constituents Supported Planning at the Start and Completion of First-generation Programs, 1986

The Northeast appears to have been considerably more effective in building support among key constituents over the course of statewide forest resource planning programs. This was probably explainable as a result of the emphasis given to public involvement in the Northeast.

Respondent Group Perceptions of Political Support

Perceptions of state forest resource planners and state foresters varied considerably with respect to the political support given to planning programs by legislatures and other state agencies (Appendix F-4). Planners' perceptions of legislative support were relatively low at the outset of planning and rose significantly by the completion; state foresters' perceptions were higher at the outset and decreased slightly by completion. With respect to other state agencies, planners perceived significantly less support than state foresters at both the outset and the completion of planning, although both groups perceived support as increasing considerably. It was possible to conclude that planners and state foresters would be well advised to communicate closely when developing planning strategies, so that any differences in perception can be recognized and addressed.

Political Support and Performance

Relationships between levels of political support by key constituent groups and measures of planning performance were also examined. Political support at the outset of planning was not related to performance. However, those programs with strong political support by most constituent groups at the completion of planning were associated with high performance. This suggests planners working on programs should consider seeking the support of a broad number of key constituents in order to have the program perceived as effective.

CHAPTER IV

PROCESS OF STATEWIDE FOREST RESOURCE PLANNING

The processes used to conduct statewide forest resource planning programs may be as significant to program success as planning contexts. Some strategic planning models present process as independent of context, implying that a particular process can be utilized in any planning situation. Other models present process as dependent on context, suggesting that the process should fit the specific situation. Little empirical evidence exists with respect to the effectiveness of different planning processes. In fact, past evaluations of strategic planning programs have failed to even describe the processes used, let alone assess them (Armstrong 1983). Identified here are the major processes employed in statewide forest resource planning programs across the country. More importantly, these processes are characterized by assessing the degree to which they address significant process elements.

Types of Planning Processes

Three different process-types were generally utilized in first-generation forest planning programs: issue-driven, goal-oriented, and interactive. Patterned after the process set forth by the RPA, the federal Forest and Rangeland Renewable Resources Planning Act of 1974, the issue-driven process consists of a rational, comprehensive set of planning activities (Figure 3).

Many statewide forest resource planning programs adopted issue-driven planning because it was the process first advocated by State and Private Forestry, USDA Forest Service. However, issue-driven planning began receiving substantial criticism for focusing on problems related to existing forestry policies and programs rather than on future opportunities and needs. For this reason, a number of states chose, or shifted to, goal-oriented planning. As the name suggests,

Figure 3. Issue-Driven Process: Common Set of Planning Activities

I. PRE-PLANNING

Background

Agency Overview, Planning History

Authorities, Jurisdictions, Mission Statement

Description of Agency Programs, Activities

Coordination Needs, Relationship to Other Planning Processes

Initial Direction or "Concept"

Planning Process Description--Including Public Involvement Plan

Plan of Work

II. ISSUE DEVELOPMENT

Identification, Consolidation, Prioritization of Issues

Assessment of Current Management Situation

Develop Issue Narrative, Description, Analytical Background

Initial Goals, Strategies to Address Issues

Specify Planning Questions, Decision Space

III. INVENTORY--ANALYSIS

Determine Supply/Demand Relationships

Specify Basic Assumptions, Projections, Limitations

Data Collection, Analysis, Synthesis and Display

Social, Economic, Environmental Assessment

IV. PROGRAM DEVELOPMENT

Establish Management Direction--Goals, Objectives, Standards, Guidelines, Constraints,
Targets, Costs, Outputs

Develop State Forest Resource Plan Program Outline

Describe Decision and Process Criteria

V. PROGRAM ALTERNATIVES

Describe Evaluation Criteria, Application Guidelines

Analysis of Alternatives

Identify Interrelationships, Trade-offs, Impacts, Agency Capability to Meet Demands,

Contribution to Broader Objectives, Economic Efficiency, Environmental and Equity
Considerations

VI. FINAL DIRECTION

Revise Initial Goals, Objectives, Output Targets, Work Plan and Course of Action

Reassess Strategies, Decision Criteria, Information Needs, Analysis Procedures

Recommend Course of Action (Selection of Preferred Alternative)

Program and Public Policy Development

Action Plans

Figure 3. Continued,

VII. IMPLEMENTATION/MONITORING

Establish Measurement Procedures, Evaluation Criteria and Accomplishment Reporting Techniques

Describe/Schedule/Assign Evaluation Tasks, Frequency, Permissible Deviation and Provisions for Amendment and Revision

Describe Selected Program Effects (Intentional and Otherwise)

VIII. PROGRAM UPDATE

Source: McCann and Ellefson 1982.

goal-oriented planning concentrated on future goals rather than current issues. In so doing, it represented a more positive approach to setting forth direction for state forestry programs.

Interactive planning, developed by the Center for Interactive Management at the University of Virginia, allows stakeholders in a planning situation to define a desirable future and identify strategies for attaining it. The process is highly-structured, involving the participation of

key members from a state's forestry community in workshops and on task forces. Structured group techniques (e.g., Nominal Group Technique, Interpretive Structural Modelling) are employed to help establish goals and objectives. Task forces are usually appointed to promote a sense of commitment and to assign responsibilities within the forestry community.

Table 5. Process-Types Used for First-Generation Statewide Forest Resource Planning Programs

Process Type	States
Issue-Driven	26
Goal-Oriented	7
Interactive	3
Issue-Goal	6
Goal-Interactive	1
Issue-Goal-Interactive	1
(No response to survey)	4
Total	48

Most states employed an issue-driven planning process for first-generation statewide forest resource planning programs (Table 5). This was especially dominant in the Northeast. A number of states, particularly in the West, applied straight goal-oriented processes. Nearly as many states nationally utilized processes combining characteristics of both

issue-driven and goal-oriented approaches. Three Southeastern states used interactive processes.

Significant Process Elements

Since the same process-type may be applied quite differently from one state to another, simply identifying the process used provided very limited information. Therefore, planning processes were also characterized by assessing the degree to which significant process elements were addressed in each state's planning program. Many of these elements were identified by state forest resource planners (USDA Forest Service 1986). Others were common elements of processes selected from the strategic planning literature.

By assessing process elements, it becomes possible to examine the comprehensiveness of statewide forest resource planning programs and to identify the process elements given the greatest emphasis during first-generation programs. Process elements also allow for examining regional differences, and differences in respondent group perceptions, with respect to the character of planning processes. Appendices G-1, G-2, and G-3 show the results of process element assessments, for the nation, by region, and by respondent group, respectively.

National Perceptions of Process Elements

For seven of the 13 process elements, a majority of the respondents agreed that the elements had been effectively addressed. Agreement was also the highest choice for four other elements. Uncertainty dominated the other two, and were substantial components of all elements (Figure 4). Mission definition and goal development were seen as the most effectively addressed process elements. External assessment, and planning and budgeting link were the two least effectively addressed elements.

This evaluation focuses primarily on relative levels of agreement with respect to process elements, which represent varying degrees of effectiveness. However, levels of disagreement and uncertainty may also be significant for assessments of some process elements. Disagreement generally reflects considerable familiarity with a planning effort and its environment. A respondent who disagrees may be making a statement that the process element was either not appropriate to a particular planning effort or not effectively addressed through a planning effort. Uncertainty probably reflects a lack of familiarity with a planning effort or with particular process elements. Such uncertainty may be due to a lack of interest on the part of respondents, or to a failure of planning programs to provide adequate information.

Mission Definition

Defining the mission of an organization (i.e., its basic values and social purposes) is an essential element of strategic planning (Bryson 1985). Most respondents (63 percent) agreed that missions of state forestry organizations were clearly defined (Figure 4). However, several who agreed also commented that the mission of the state forestry organization had been clearly defined before statewide planning began. This suggests that the data probably overstates the number of planning programs that actively defined the mission of the forestry organization. The comment of an environmental group representative in South Carolina exemplifies this:

"But, the mission statement of the forestry organization had previously been clearly defined. I doubt that SFRP can be credited with this."

Some negative responses came from states in which defining the mission of the state forestry organization was perceived as an activity separate from statewide forest resource planning. The mission might be defined, but as an internal planning activity. In New Hampshire, for example, statewide forest resource planning focused on the forestry community at large, as the following comment by the State Forest Resource Planner illustrates:

"In our plan we did not emphasize the Division's role, viewing ourselves as just one part of the community."

The initial statewide forest resource plan in Minnesota did not specifically address the mission of the state forestry organization because of the comprehensive nature of the planning effort. The forthcoming update, however, focuses more on the activities of the state's Division of

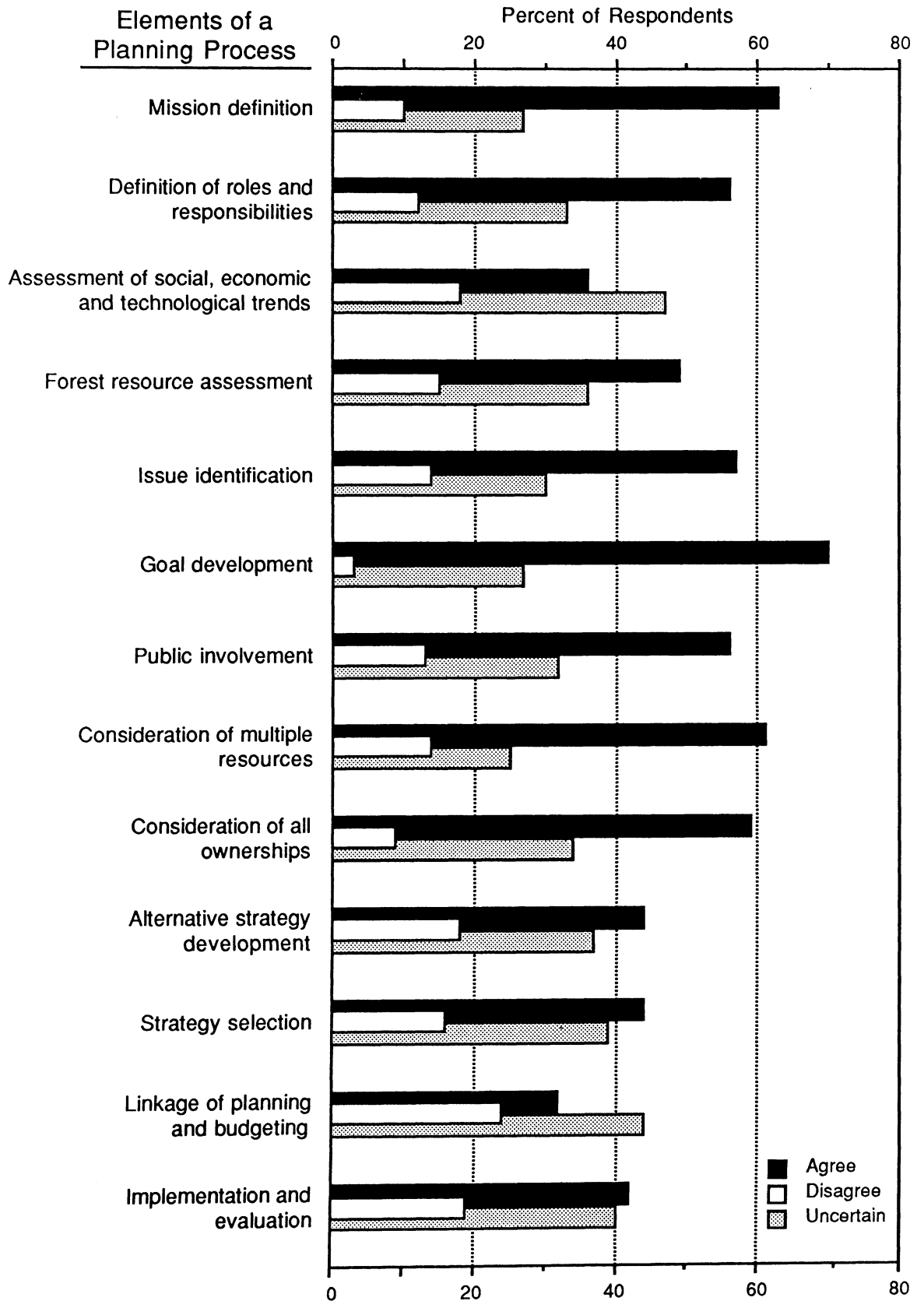


Figure 4. National Respondent Perceptions of Whether Important Elements of a Planning Process Were Effectively Addressed by Statewide Forest Resource Planning Programs, 1986

Forestry. It includes a detailed mission statement, being developed by the Division's management staff.

The perceived scope of statewide forest resource planning varied among respondents. Some saw internal planning in state forestry organizations as an integral part of statewide forest resource planning programs, while others saw it as completely separate. Such differences in perception presented some difficulty in interpreting assessment results.

Internal Assessment

Strategic planning processes usually include an internal assessment of an organization's roles, responsibilities, and structure, to determine whether they are clear and consistent (Bryson 1985). A majority of the respondents (56 percent) agreed that state forestry organizations' roles, responsibilities, and structures were assessed (Figure 4).

Many among those who agreed perceived that state forestry organizations assessed their roles and responsibilities in order to respond to recommendations specified in statewide forest resource plans. New Hampshire's Division of Forests and Lands, for example, conducted an "Interpretive Structural Modelling Workshop" to prioritize recommendations in the State Forest Resources Plan--in essence to clarify its roles and responsibilities within the state's forestry community. And, Minnesota's Division of Forestry assessed its roles and responsibilities through an internal program planning process incorporating the recommendations of the Minnesota Forest Resources Plan.

Other state forestry organizations assessed their roles and responsibilities within their planning programs only as the needs arose. For example, because California's statewide forest resource planning program identified a number of complex issues involving overlapping responsibilities between the Department of Forestry and other natural resource agencies in the state, officials in the Department were somewhat compelled to conduct certain assessments.

Several respondents commented that the roles and responsibilities of the state forestry organization were assessed, but organizational structure was not. Wisconsin's State Forester, for example, made the following remark:

"By design and deliberately we avoided the organizational structure question to a large degree. This was an administrative decision."

Perhaps fewer states assessed organizational structure because it involves more complex or sensitive issues than roles and responsibilities.

Some statewide forest resource planning programs did not undertake any assessment of organizational roles, responsibilities, and structure. Oregon's State Forester stated that there was no need for such assessment in his state since "this was already in place in existing law."

External Assessment

Assessing an organization's external environment is one of the most critical, and difficult, elements of a strategic planning process. A variety of factors in the external environment can have profound effects on an organization's activities (e.g., social, demographic, economic, and technological trends). Only 36 percent of the respondents agreed that such external factors were adequately assessed (Figure 4). This represents one of the lowest perceptions of effective

assessment among all the process elements considered. Comments reveal that three factors were primarily responsible: a lack of data and information, a reluctance to undertake such assessments, and inappropriate analytical methods.

State forest resource planners relied largely on existing information for external assessments, and appropriate information was often unavailable. In addition, many state forestry organizations were not accustomed to assessing forces outside the field of forestry, and did not readily take to such activities. New Hampshire's State Forest Resource Planner noted both of these problems:

"Socio-economic analysis was not really done in this state--it was not acceptable to the 'old forestry hands.' There was also a severe lack of data; had we had better information, we would have used it."

A number of state forest resource planners remarked that they would like to have done better external assessments, but either the data or appropriate analytical methods were missing. These represent shortcomings that need to be given consideration in order to improve the next generation of statewide forest resource plans. Minnesota's planning program is responding to such shortcomings by "doing much more targeted economic assessment in the update of the Minnesota Forest Resources Plan," according to their Supervisor of State Forest Resource Planning.

Among states in which respondents perceived that external factors were adequately assessed, California was an interesting example. The statewide forest resource planning program in California focused almost exclusively on assessments related to forest and range resources, and demonstrated strong analytical capabilities. The Deputy Director of Forest Management, Department of Forestry, emphasized the value of such capabilities:

"California is in the fast lane in terms of social change and land development. We've always reacted to current change rather than looking to the future. We now have the tools to be proactive."

Forest Resource Assessment

The Federal Planning Assistance Program (1981) identified "the assembly, analysis, display and reporting of State forest resources data" as one of the primary purposes of statewide forest resource planning programs. Many states acknowledge forest resource assessment (i.e., in terms of supply and demand) as a key purpose of their planning efforts. Nearly half of the respondents (49 percent) agreed that forest resources were adequately assessed (Figure 4)². This represents only a moderate level of effective assessment, which is somewhat surprising considering the emphasis given to improving forest resource information. Indiana's State Forest Resource Planner presented two frequently cited reasons for inadequate forest resource assessments:

"Statewide inventory data was old and unreliable, plus there was a lack of technical expertise."

² Although this process element refers to all forest resources (i.e., timber, wildlife, water recreational resources, etc.), comments reveal that most respondents interpreted forest resources as meaning timber resources.

Most states relied upon forest survey data collected by the USDA Forest Service. In states where such data was outdated, and significant changes seemed to have occurred since the last survey, many respondents said that the findings of the forest resource assessment were unreliable. Furthermore, planners in many states lacked the technical skill to analyze such data in terms of supply and demand. Some remarked that although supply was adequately assessed, demand was not. This reflects a need for further research to develop practical methods for assessing forest resources.

Issue Identification

The identification of strategic issues is a critical process element because it determines the focus of a strategic planning effort. Strategic issues usually incorporate the results of analyses performed through internal and external assessments and the comments received through public involvement efforts. After review and approval, they represent a commonly accepted set of problems or opportunities that can be addressed through planning.

A high proportion of the respondents (57 percent) agreed that all important forestry issues were identified (Figure 4). In at least a couple of states, however, identifying all forestry issues resulted in problems. A legislator in Maine, for example, agreed with the statement, but remarked that important forestry issues "were mixed with a whole bunch of unimportant ones which diffused the focus."

Too broad a range of issues can entail difficulties for developing strategies and putting them into action. A more narrow range of the most significant issues may be more administratively manageable. Michigan's State Forester noted that their planners recognized this early in their process:

"Not all important forestry issues. We deliberately focused on a small number of the most important."

The following comment by the Supervisor of State Forest Resource Planning in Minnesota presents another important lesson related to issue identification:

"The process of raising issues also raises expectations that we as an agency will do something about them. When we are unable to address all of them, some people are disappointed."

Besides avoiding taking on too many issues, planners should be wary of raising issues that cannot be resolved. As noted by Wildavsky (1979), "the problem that has no solution is not a problem."

Some states identified and gained broad agreement on forestry issues through considerable review, comment, and synthesis. Other states used structured group techniques to reach a consensus in relatively short periods of time. The latter techniques have obvious time and expense advantages. The former, however, may have certain advantages in terms of developing new relationships and channels of communication, and in providing more comprehensive information.

Goal Development

Goals are developed through most strategic planning processes as part of a common vision of success (Bryson 1985). In statewide forest resource planning programs, goals usually address

the issues that have been identified. However, they also add a new dimension to planning by encouraging innovative thinking with respect to the future.

Seventy percent of the respondents agreed that goals were developed for forestry programs and activities (Figure 4). This represents the highest degree of effectiveness among all process elements. However, because the character of goals varied considerably from state to state, the high degree of effectiveness may be somewhat misleading. A number of comments called attention to perceived problems with goals--they were often too general, or ill defined, or narrow and self-fulfilling, or only appropriate for some programs.

A number of states encountered difficulties when developing goals that addressed issues, and which were also expected to be tied to specific programs and activities. Minnesota experienced this problem. Because the goals in the statewide plan, which address issues, were too broad to relate directly to programs in the Division of Forestry, specific goals had to be developed for each program. The result, according to the State Forest Resource Planning Supervisor, was that no clear connection existed between statewide and program goals.

States that focused exclusively on goals, or did not attempt to tie issues and goals together, had fewer problems with goal development. In Mississippi, for example, goals were generated and synthesized with relative ease at a symposium where participants responded to the question "What needs to be done to bring about a desirable forestry future for Mississippi by the year 2010?" (Mississippi Forestry Commission 1983).

Public Involvement

Active participation by all potentially affected interests is considered to be an essential element of strategic planning (McCann and Ellefson 1982). When planning programs are undertaken by public agencies with broad jurisdictions, the involvement of all pertinent interests becomes a very complex task.

State forest resource planners recognize public involvement as a critical component of statewide forest resource planning programs (USDA Forest Service 1986). A high percentage of the respondents (56 percent) agreed that public involvement was adequate and appropriate (Figure 4).

Comments reveal that few respondents were deprived of the opportunity to become involved. But among those respondents who argued that public involvement was inadequate, two perceptions prevailed. One was that the planning program could and should have done more to involve various interests. The other was that most outside interests showed little motivation to become involved, although they had ample opportunity. The following comments, respectively, represent these views:

"Our public involvement effort for the next plan has to be stronger."

"Everyone had the opportunity but some key players opted out."

These opposing views raise relevant questions. How much can and should a planning program do to gain the active participation of pertinent interests? Where does the responsibility of the planning program to provide adequate opportunity for involvement end, and the responsibility of various interests to participate begin?

An environmental group representative in Iowa acknowledged the most common problem with involvement efforts--not knowing how to involve the general public:

"The people involved with the planning program are excellent individuals. The basic difficulty is a general lack of understanding regarding the involvement of nonprofessionals, i.e., the general public and private sector interests."

Statewide forest resource planning programs in Minnesota and New Hampshire demonstrated relatively successful public involvement efforts. Both, however, became overextended. Minnesota's State Forest Resource Planning Supervisor remarked that although the planning program afforded plenty of opportunity for public involvement through meetings and review drafts, the process was "probably inefficient". He suggested the development of a "public involvement plan" in order to bring greater control to the process.

The President of the Society for the Protection of New Hampshire's Forests emphasized the need to keep public involvement efforts brief and manageable:

"The process was big on public involvement, but it got carried away. Public involvement should be done fast, to generate excitement, keep people interested, and get some action out of it."

Multiple Resource Assessment

From one of the earliest formulations of statewide forest resource planning (National Association of State Foresters 1981) to the most recent description of what to look for in evaluating such planning (USDA Forest Service 1986), a multiple-use management strategy has been a key component. Of concern here was whether planning programs adequately addressed the use and management of multiple forest resources (e.g., timber, wildlife, recreation). More than 60 percent of respondents agreed that multiple resources were adequately addressed (Figure 4).

Comments suggest that in several states where multiple resources were not addressed, planning had not been undertaken with this purpose in mind. In Oregon, for example, the forces behind statewide forest resource planning were perceived timber supply problem and inadequate information. Therefore, the program focused on timber as the primary resource. Oregon's State Forester provided a further explanation:

"We were covering private lands to a great extent and multiple use forestry is not an objective on many of their ownerships."

In other states where multiple forest resources were perceived to have been given inadequate consideration, the onus may be on representatives of those multiple-resource interests rather than on the planning program. A comment by Mississippi's State Forest Resource Planner illustrates this:

"Pathways does not focus at all on water, wildlife and other multiple use interests, although many of these interests will probably benefit from other targets. Of the 21 objectives gleaned from the original 32, wildlife and water did not show up in any of them. Wildlife and water interests were invited to participate, but generally did not show up."

As in the previous process element, the question of responsibility arises. Should the planning program attempt to address multiple-resources or should various publics be expected to actively

support their own interests? The context of the forestry community in each state may determine where responsibility lies.

Contribution of Various Ownerships

The need to address the potential resource contributions of all forestland ownerships has been consistently recognized as a significant planning element (USDA Forest Service 1981, USDA Forest Service 1986). Assessed here was whether state, federal, and private forestland ownerships were given adequate consideration during each phase of the planning process. A high percentage of the respondents (59 percent) agreed that various ownerships were adequately addressed (Figure 4). Due to diverse ownership patterns, the emphasis of planning programs varies from state to state, some focusing more on public lands, others on private lands. The quality of the information on various ownerships may differ also, as a representative of South Carolina's forest industries suggests:

"Because of the predominance of non-industrial private forest lands in South Carolina (73 percent), most attention was directed here. There may have been reluctance to be too specific, particularly on federal and industrial ownerships."

Comments reveal that federal ownerships in a number of states (e.g., Minnesota, New Mexico, Utah) should have been given greater attention. Although statewide planning programs were supposed to have been comprehensive, considerable uncertainty existed about the interrelationships between these programs and federal planning programs. Thus, many states approached information concerning federal ownerships with caution. Improved communication and cooperation between state and federal planning programs has alleviated this problem in some states (e.g., Oregon), but further efforts may be necessary in others.

Alternative Strategy Development

Rational strategic planning processes respond to issues by developing a range of alternative strategies. Such activity promotes creativity and fosters greater understanding of different perspectives (Bryson 1985). A relatively low percentage of respondents (44 percent) agreed that alternative strategies were developed (Figure 4). Comments reveal that a number of states chose not to develop alternative strategies, perhaps because of the additional effort such a task entails.

If the National Forest Planning process represents the model that most state forest resource planners considered when designing their own planning processes, the development of alternative strategies might have appeared as too formidable a task, both politically and technically. The position was summarized by Massachusetts's State Forest Resource Planner:

"I assume you are referring to a set of alternatives like the U.S. Forest Service develops. While our plan recommendations are based on a review of options, we did not develop a formal set of alternatives."

In a number of states, alternative strategy development was not appropriate for the selected planning process. New Hampshire's State Forest Resource Planner provided one example:

"We consciously decided against construction of artificial alternatives. We had a Citizen's Committee for each of our issues, and these people wanted to make concrete recommendations to us. Because of the overlap among committees, we ended up with lots of alternative actions."

In Mississippi separate Task Forces were established to address major forestry issues. They were responsible for developing actions (i.e., tasks) for resolving issues, by any means they desired.

Several planning programs developed sets of strategies through committee or group action. Since these strategies were arrived at through consensus, they, in a sense, represent final strategies. Programs that developed strategies in this way represent "political" planning processes as opposed to "rational-comprehensive" processes in which alternative strategies are developed and evaluated by pre-selected decision criteria.

Strategy Evaluation and Selection

In a rational strategic planning process, final strategies are selected through an evaluation of proposed alternative strategies. Consistent with this process, state forest resource planners have identified the selection of a "recommended program based on an analysis of alternatives" as a key element of statewide forest resource planning (USDA Forest Service 1986). A relatively low percentage of the respondents (44 percent) agreed that final strategies were based on a fair evaluation of alternatives (Figure 4). The fact that this percentage equals that in the previous process element (i.e., strategy development) suggests that those states which developed alternative strategies also evaluated them.

Comments were limited with respect to this process element. Some states developed an array of strategies rather than a set of mutually exclusive strategies. In New Hampshire, for example, ten Citizen's Committees developed a multitude of recommendations (i.e., strategies) to respond to issues. Final recommendations were selected at a public forum which served as a public evaluation process.

Planning and Budgeting Link

One of the earliest stated purposes of statewide forest resource planning was "to provide a procedure for generating information needed to prepare and gain support for agency program budgets" (USDA Forest Service 1981). The need to link planning and budgeting is still recognized as one of the key elements of such planning programs (USDA Forest Service 1986). Assessed here was whether a clear linkage was established between selected strategies and an agency's budgetary process. One example of such a linkage is setting funding priorities among various strategies or objectives.

Only 32 percent of the respondents agreed that a planning and budgeting linkage was established, while 24 percent disagreed (Figure 4). This represents the lowest level of agreement and highest level of disagreement among the identified process elements. Comments suggest two primary reasons for such low agreement. One is that a planning and budgeting linkage was considered to be outside of or not appropriate to the planning program's scope, as noted by Wisconsin's State Forest Resource Planner. Another example is evident in a comment by New Hampshire's State Forest Resource Planner:

"As mentioned, the Division is only one partner in the implementation process. Therefore, not all action required money from us; in fact, only 68 out of 104 recommendations involved the Division."

These comments separate the statewide plan from the state forestry organization and imply that the plan should not be concerned with budgeting.

The other reason is that some states encountered political and institutional difficulties in developing such linkages. Arkansas' State Forester noted their attempt to link planning and budgeting:

"The attempt was made but the political situation was such that the linkage was not shown clearly in the document."

Another example was in Minnesota. A considerable effort was made to link planning and budgeting, but with little success, largely due to institutional barriers. Minnesota's Supervisor of State Forest Resource Planning described the situation:

"In 1983, the Division of Forestry's program structure did not mesh with the budgetary programs funded by the Legislature. There were 19 or 20 forestry programs, but only 4 major budgetary areas. To complicate this further, some forestry programs were divided between different budgetary areas. The situation made planning virtually impossible. Also, the timing of our first planning process did not allow us to have any effect on the budgetary process.... We finished the plan just after the budgetary process had been completed."

Based on the low perception of effectiveness, developing a linkage between statewide forest resource planning and an agency's budgetary process appears to be especially difficult to address. The complexity of such a task also varies considerably from state to state, depending upon the character of both the planning and budgeting processes.

Implementation, Monitoring and Evaluation

The need to develop processes for implementing, monitoring, and evaluating recommended programs (i.e., final strategies) was given considerable emphasis in early statewide forest resource planning guidelines (USDA Forest Service 1981). Recent evaluation criteria also identify such processes as critical elements of planning (USDA Forest Service 1986). A moderate percentage of the respondents (42 percent) agreed that such processes were developed (Figure 4). Although few comments were received with respect to this process element, a remark by Utah's State Forest Resource Planner concisely illustrates the common difficulty of maintaining interest and commitment once the plan is finished. "Monitoring efforts evaporated," he said.

Case studies reveal that New Hampshire, Mississippi, and Minnesota undertook considerable efforts to implement, monitor, and evaluate planning strategies. With respect to statewide plans, as opposed to internal agency plans, each state conducted a survey and issued (or soon will issue) a report on the status of all recommendations or tasks developed through the planning effort. These reports are intended to renew interest in on-going planning efforts, recognize accomplishments, and exert some pressure on organizations which have done little to achieve appointed tasks. Mississippi has taken extraordinary steps to ensure continued effort in accomplishing the tasks identified its statewide plan. Support of the Governor and other leaders is clear from this comment by the State Forest Resource Planner:

"By Executive Order, the Governor established the "Continuing Forum" to oversee the implementation of Pathways. Members of this task force were carefully selected from a broad cross-section of the forestry community. By-laws were established to formalize the activities of the task force. The role of the Continuing Forum is to monitor objectives and tasks, and to secure commitment to specific task accomplishments."

With respect to internal planning, work planning and accomplishment reporting systems are common among state forestry organizations. Responses to open-ended questions by state forest resource planner suggest that over half of the states employ such internal monitoring and evaluation systems.

Regional Perceptions of Process Elements

Differences between respondent perceptions of planning processes in the Northeast, Southeast, and the West were assessed. For most process elements, perceptions varied little between the three regions (Appendix G-2). For five process elements, however, a significant difference (i.e., in the range of 15-20 percent) appeared between perceptions in one region and those in the other two.

Respondents in the Northeast had a much higher level of agreement than the Southeast and West with respect to the effective use of issue identification, public involvement, multiple resource assessment, and contribution of various ownerships (Figure 5). These differences could be attributable to the predominant use of issue-driven processes in the Northeast, which are generally more comprehensive than other processes. Or, planning programs in the Southeast and West intentionally might have given these process elements less emphasis.

Another regional difference was the relatively low level of agreement among respondents in the West with respect to the effective use of strategy evaluation and selection (Figure 5). One explanation for this difference may be that the greater use of goal-oriented planning, and stronger emphasis on agency planning in the West, resulted in a more direct approach to selecting final planning strategies--ones that did not involve an explicit effort to evaluate alternative strategies. The lack of a such an explicit effort can sometimes lead to problems with constituent groups unhappy with the final strategies. Programs in the West may find it worthwhile to give greater attention to such an approach in future planning efforts.

Respondent Group Perceptions of Process Elements

Differences among respondent group perceptions with respect to the effective use of process elements might suggest changes to improve future planning processes. For example, if only one group (e.g., legislators) perceived social and economic analysis as inadequate, state forest resource planners and state foresters could provide better assessment information in the next generation of planning, or at least explain to the dissenting group why external assessments were conducted in a particular manner. Cross tabulating the perceptions of the seven respondent groups with respect to the effective use of process elements enabled the identification of a number of important differences (Appendix G-3). Several are identified below:

- o State forest resource planners and state foresters showed a significantly higher level of agreement than other groups with respect to the effective use of certain process elements (i.e., mission definition, issue identification, multiple resource assessment, alternative strategy development). This probably reflects greater familiarity with planning processes and the degree to which process elements have been addressed. It might also suggest that other groups were not sufficiently informed about, or interested in, planning processes.
- o For several process elements (i.e., internal assessment, external assessment, public involvement, strategy evaluation and selection), state forest resource planners' perceptions of effectiveness differed significantly from state foresters'. These represent differences between staff-level and management-level perceptions and suggest a lack of communication. Planners and state foresters should come to a clear sense of mutual

understanding with respect to process elements in order to minimize such differences in future planning efforts.

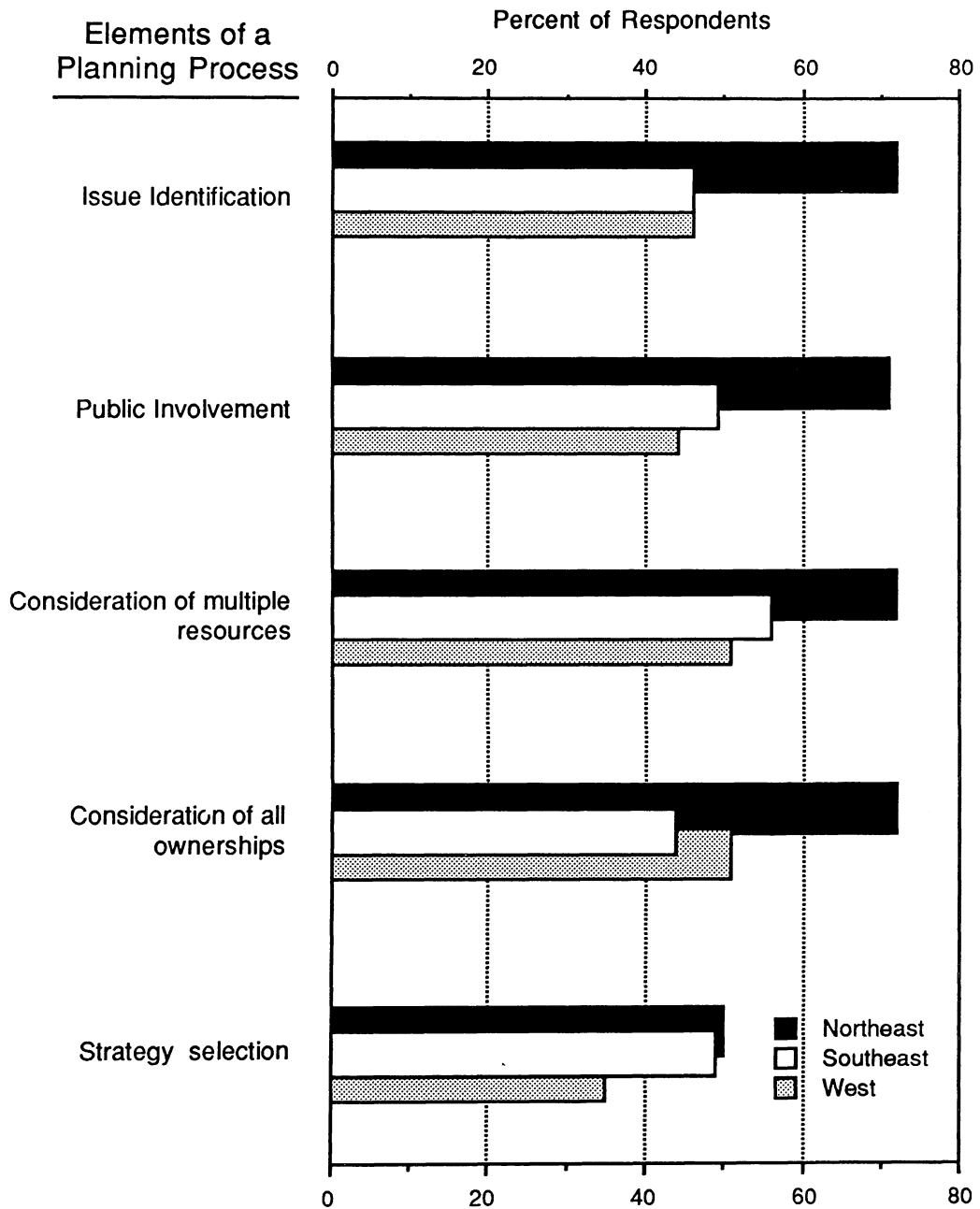


Figure 5. Regional Respondent Perceptions of Whether Important Elements of a Planning Process Were Effectively Addressed by Statewide Forest Resource Planning Programs, 1986

- o State budget directors generally showed a significantly higher degree of uncertainty about process elements than did other groups. This is not surprising given the broad range of programs with which they are involved. However, planners and state foresters might focus on providing state budget directors with appropriate and timely information. Several state budget directors expressed considerable interest in statewide forest resource planning programs.
- o High public officials (i.e., administrative officials overseeing state forestry organizations, state budget directors, legislators) seldom disagreed that process elements were adequately addressed. They tended to be either positive about planning effectiveness or uncertain. This may be a reflection that they receive the majority of their information about planning from state forestry organizations, primarily the state foresters. Apparently, state foresters and other agency officials are creating favorable impressions about planning; but perhaps they could be providing more planning information to higher public officials, in an appropriate manner.
- o Environmental group representatives criticized planning processes most, among all respondent groups. They showed nearly equal levels of agreement and disagreement with respect to the effective use of several process elements (i.e., external assessment, multiple resource assessment, alternative strategy development, strategy evaluation and selection, planning and budgeting link, implementation, monitoring, and evaluation).

Process Elements by Process Type

Because process elements may be addressed more effectively through particular planning processes, perceptions of process elements were explored when different process-types were employed. National perceptions of process elements were crosstabulated with four process types, namely, issue-driven, goal-oriented, interactive, and issue/goal processes (Appendix G-4). Results showed considerable variation among process-types with respect to how well particular process elements were addressed. Three of the most significant differences are:

- o Issue/goal processes addressed two process elements (i.e., internal assessment, and implementation, monitoring, and evaluation) significantly more effectively than all other process types, and consistently addressed process elements as well as any other process type. Six states employed issue/goal processes: Alabama, Colorado, Michigan, Montana, Nebraska, and Oklahoma. And, though the process and context in each state varied considerably, each state identified its process-type as issue/goal and had success employing it. Such success warrants further investigation.
- o As might be anticipated, issue-driven processes addressed issue identification significantly better than other process types. Consistent with their objective of being comprehensive, issue-driven processes also addressed public involvement and multiple resource assessment very well.
- o For most process elements, interactive processes showed higher uncertainty than other process types. Because interactive planning processes are highly structured and relatively short, respondents may be unsure whether certain process elements have been addressed. Involvement in interactive processes is also limited to leaders within a state's forestry community, so awareness of the process may not be as widespread as with other processes.

Improving the Effectiveness of Planning Processes

In conjunction with structured questions that characterized statewide forest resource planning processes by assessing significant process elements, statewide forest resource planners were asked how they would modify planning processes to improve effectiveness. The open-ended responses are summarized below, generally in order from more-common to less-common responses:

- o Use a goal-oriented rather than an issue-driven process. Focus on goals, to be proactive rather than reactive. According to New Hampshire's State Forest Resource Planner, issue-driven processes "neglect programs that are working well and therefore are not issues," which can lead to some resentment by program managers and individuals who support those programs.
- o Broaden involvement during statewide forest resource planning to include all relevant interests, and increase involvement of forestry staff (including field staff) during program planning. This is perceived to be necessary if planning is to gain acceptance and support.
- o Seek support from elite policy-makers in the state (e.g., Governor, legislators, leadership in federal, state, and local agencies) at the outset of planning. The creation of a council or advisory board may be useful to oversee the planning effort and help establish direction.
- o First develop a comprehensive, statewide forest resource plan which provides general information and program direction. Then, prepare more detailed program plans and sub-state level plans which are directly linked to the comprehensive plan.
- o Devote more resources to the planning process in order to improve the quality of analysis and program specifications.
- o Employ at least one full-time planner working under the guidance, and with the support, of the state forester.
- o Encourage processes and procedures that maintain enthusiasm and momentum.

The State Forest Resource Planner in Ohio provided some insight into the nature of these programs that should be taken into consideration during the development of future planning programs:

"The State Forest Resource Plan has spawned the development of a Division of Forestry strategy, which says what the Division is, what it hopes to do, when, and for how many dollars.... The strategy is largely a tool to get the State Forest Resource Plan moving, and to help express the ideas of statewide forest resource planning to more people within the Division. Overall, however, such planning has not been as effective as I had hoped, because, I believe, it has been largely misunderstood by people within and outside the Division. This misunderstanding might stem from my belief that effective forest resource planning requires one to (1) look beyond the trees to understand the forest resources, (2) think in terms of 'what if' more than 'what is', and (3) develop forestry programs to meet the needs of people rather than the needs of the resource."

CHAPTER V

OUTPUTS OF STATEWIDE FOREST RESOURCE PLANNING

Planning outputs, as identified here, are an array of benefits that might be expected to accrue to state forestry organizations and state forestry communities as a result of statewide forest resource planning programs. Assessments of these benefits can provide valuable information about returns to investments made by state and federal governments. Because such programs can result in unanticipated effects, open-ended questions were also used as a tool for inquiry.

Significant Planning Benefits

Nine different planning benefits were identified and assessed. Several had been recognized by state forest resource planners as common planning goals (McCann and Ellefson 1982). Others have been gleaned from lists of potential benefits presented by Cole (1982) and Ellefson (1984). Examined is the degree to which respondents perceived each planning benefit as having been realized (Appendices H-1, H-2, and H-3).

National Perceptions of Planning Benefits

Although uncertainty was high with respect to the achievement of many planning benefits, a large proportion respondents generally agreed that benefits were in fact realized (Figure 6). The two most common benefits were long-term direction, and communication and coordination. Authority, accountability, and control was one of the two least frequently perceived benefits. Political Support was the the other.

The primary focus of this evaluation is on relative levels of agreement with respect to each planning benefit. Those levels represent varying degrees of effectiveness. However, levels of disagreement and uncertainty may also be significant for assessments of some planning benefits.

Disagreement generally reflects considerable familiarity with a planning effort and its environment. A disagreeing respondent does not perceive a particular benefit resulting from planning, either because the benefit was not relevant to the planning effort, or the effort failed to achieve it.

Uncertainty may reflect a lack of familiarity with a planning effort, or a particular benefit, as it generally does with respect to process elements. However, uncertainty might also reflect the vague nature of ill-defined benefits, or the difficulty of discerning benefits accruing within state forestry organizations. Finally, the fact that benefits are not attributable solely to statewide forest resource planning programs contributes to uncertainty.

Long-Term Direction

One of the most frequently-cited objectives of statewide forest resource planning is "to provide a clearer sense of long-term agency direction in an increasingly difficult and complex management environment" (McCann and Ellefson 1982). More than 60 percent of all respondents agreed that a clearer sense of long-term agency direction has been realized through statewide forest resource planning (Figure 6). A number of comments suggest that planning has provided the information necessary for establishing policy direction and reallocating resources. Minnesota's Supervisor of State Forest Resource Planning stated that the planning section was created, at least in part, to do the long-range thinking for the

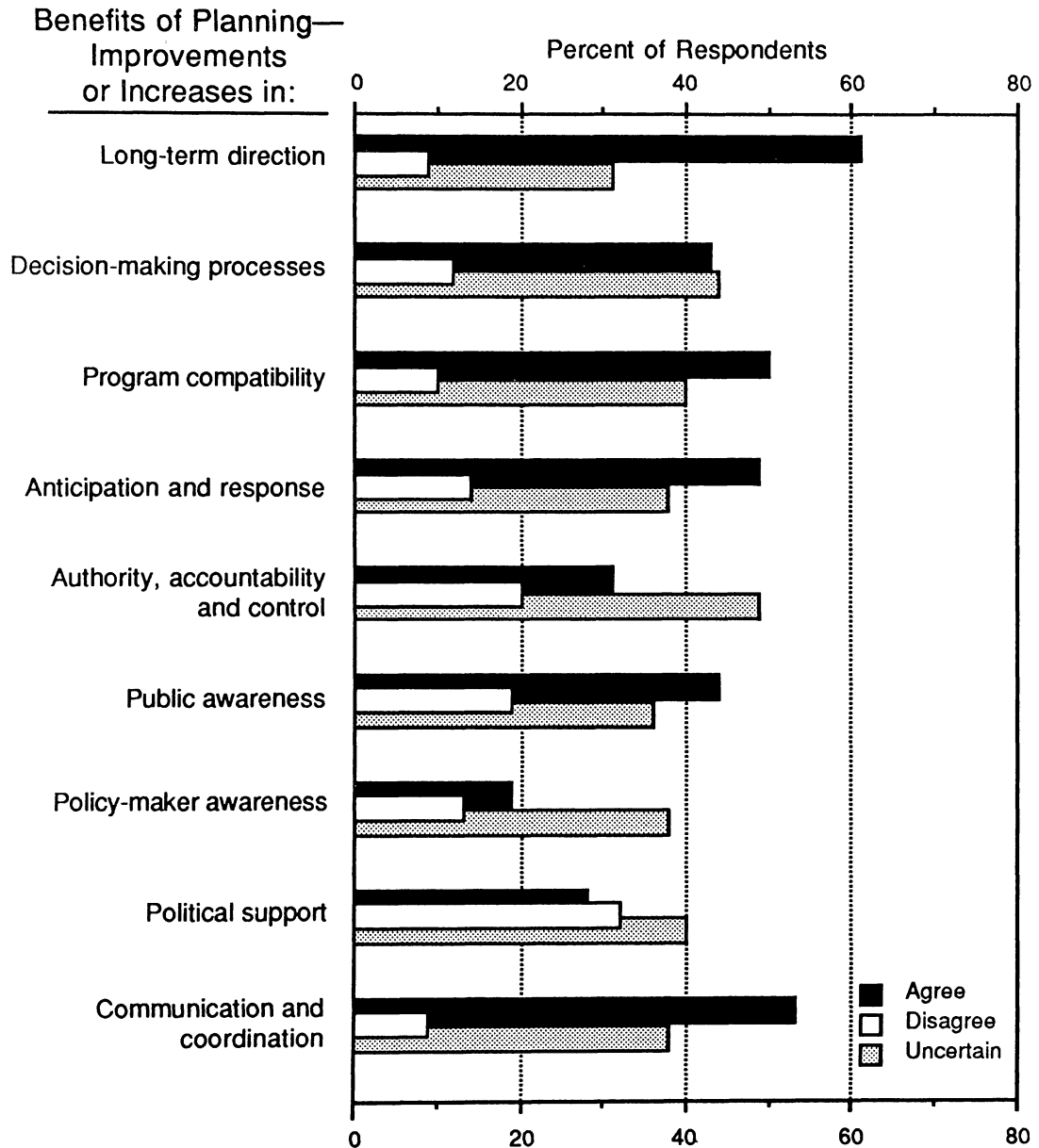


Figure 6. National Respondent Perceptions of Whether Key Planning Benefits Were Effectively Achieved by Statewide Forest Resource Planning Programs, 1986

Division of Forestry--program managers and staff were too busy with current activities. Wisconsin's State Forester made the most enthusiastic remark with respect to this benefit:

"Before the plan, we had no long term direction---or any direction! Now we know, for the first time, where we are going."

Some comments reflect difficulties encountered when attempting to establish long-term direction. Nebraska's State Forest Resource Planner reflected this with the statement that, "Budget problems currently preclude effective long-range planning." This presents the common reality that current needs, especially budgetary needs involving program continuity or survival, take priority over long-term planning.

A Maine legislator provided another insightful remark, saying "official goals are clearer, but the staff remains wedded to old objectives." This reflects a situation in which an agency has trouble adopting long-term direction, even though the direction has been specified.

Decision-Making Processes

Another primary objective of statewide forest resource planning is to improve the quality of management within state forestry organizations by fostering improved decision-making processes (McCann and Ellefson 1982). A moderate proportion of all respondents (43 percent) agreed with the statement that more efficient decision-making processes have been established, although a high level of uncertainty was also indicated (Figure 6). This uncertainty reflects considerable difficulty among respondents in discerning such improvements. Few comments were provided to help discuss this benefit. However, one possible rationale for greater decision-making efficiency is that clearer definitions with respect to an organization's mission, goals, and objectives facilitate the process of making decisions.

Program Compatibility

Another benefit of statewide forest resource planning is increased compatibility, or reduced conflict, among forestry programs. Half of the respondents agreed that program compatibility in state forestry organizations has increased because of their planning programs (Figure 6). New Hampshire's State Forest Resource Planner remarked that program compatibility "was particularly helped by applying the Interpretive Structural Modelling (ISM) process." The ISM process brought together program managers in the Division of Forests and Lands to prioritize recommendations in the statewide forest resource plan, for which the Division was responsible.

Interviews with staff members of the Forest and Range Resource Assessment Program (FRRAP), California Department of Forestry, revealed that statewide forest resource planning resulted in reduced conflict between Fire Protection and Resource Management within the Department. The relationship between the two programs was characterized as an "unhappy marriage." Efforts of FRRAP (which is within the Resource Management program) to assist planners in Fire Protection considerably lessened the tension and improved prospects for future cooperation.

Anticipation and Response

Increasing state forestry organization responsiveness to emerging opportunities and problems is another frequently cited objective of statewide forest resource planning (McCann and Ellefson 1982). Nearly half of the respondents agreed that agency ability to anticipate and respond to opportunities and problems has improved (Figure 6). Comments, however, provide little insight into the types of improvements respondents actually perceived. Perhaps respondents were simply assuming that improved information, from various assessments, and a clearer sense of direction, represented by established goals, have resulted in better anticipation and response. This may not be the case, however, if management practices within an organization have remained the same. This comment, by a forest industry representative in Colorado, suggests that planning may have little effect on functions of bureaucracies:

"Response time is not due to the planning process. Bureaucratic government is slow moving!"

Authority, Accountability, and Control

Statewide forest resource planning may provide the means for more effective oversight of programs within state forestry organizations (Ellefson 1984). Planning within these organizations can establish lines of authority and responsibility, and provide information with respect to program objectives and accomplishments. Only 31 percent of the respondents agreed that such systems have been established; 49 percent expressed uncertainty (Figure 6).

The high degree of uncertainty may reflect a lack of familiarity with internal planning activities of state forestry organizations. A number of states successfully established such systems through annual work-planning and accomplishment reporting (e.g., New Hampshire, Mississippi, Minnesota). Minnesota's State Forest Resource Planning program developed a management control structure, for implementing the strategies identified through statewide forest resource planning within the Division of Forestry (Harper 1986), which may serve as a model for other states.

Public Awareness

Statewide forest resource planning can improve the general public awareness of forestry issues. A moderate percentage of respondents (44 percent) agreed that planning provides a better means for raising public awareness (Figure 6). Comments suggest that various public involvement techniques can be credited with reaching a greater cross-section of public interests. Review documents, public meetings, governors' conferences, and special forestry celebrations (e.g., Centennial of California's State Board of Forestry) were used, with varying success, to involve, inform, and educate those interested in forestry. Wisconsin's State Forester made one of the clearest statements valuing this aspect of planning:

"This has been a great benefit of the plan. Public awareness has been raised considerably."

Much of the success attributed to public involvement is ephemeral. Only one comment, by New Hampshire's State Forest Resource Planner, suggests that on-going forums have been created to keep the public abreast of forestry issues and programs.

"We've provided a means for regular exchange through County Advisory Board. The plan also stimulated the revival of the Forestry Communications Council, which represents 32 public and private resource groups."

It is possible, however, that even without comments, this sort of activity may be occurring in other states.

Several comments indicate that although public consciousness was heightened through planning programs, some states did not take full advantage of the opportunities presented. Even in Mississippi, where the Governor and numerous state leaders took part in their Pathways planning effort, the Executive Vice President of the Mississippi Forestry Association remarked that "public information and media coverage was probably less than it should have been."

Finally, it must be remembered that several states conducted statewide forest resource planning efforts primarily as strategic plans for state forestry agencies, as emphasized in this comment by Montana's State Forest Resource Planner:

"The current plan is not intended as a means of communicating with outside interests, therefore, it doesn't address these questions."

Policy-Maker Awareness

A major objective of many statewide forest resource planning programs was to identify issues and provide information for the formulation of forestry policies. To achieve this objective, programs attempted to raise the interest of policy-makers (i.e., forestry boards or commissions, legislators, executive branch officials) with respect to forestry issues and programs. Nearly half of the respondents (49 percent) agreed that planning has provided a better means for increasing policy-maker awareness (Figure 6).

California's Supervisor of State Forest Resource Planning stated that their planning program's primary objective was to place "the issues of forestry on the agenda of politicians and policy-makers." To achieve this, their planning staff has been making an increasing number of presentations to the State Board of Forestry. One of the strengths of California's program has been providing information in an appropriate form for policy-makers. A comment by the Board of Forestry's Executive Officer illustrates this:

"FRRAP has been of great help in framing questions well for legislators, and in providing useful information for budgetary purposes."

Mississippi and New Hampshire have established requirements for formal reports to the legislature on the status of statewide forest resource planning programs. In Mississippi, by-laws of the task force established to oversee planning program implementation (i.e., the Continuing Forum) require annual reports to the State Legislature. New Hampshire's Forest Resources Planning Act of 1981 requires the State Forester to make biennial reports to the Legislature on the accomplishments and funding requirements of statewide forest resource planning.

The Forest Resources Planning Leader, Oregon Department of Forestry, commented that the Forestry Program For Oregon (FPFO) "provides the basis for justification of policy changes and actions" taken by the State Board of Forestry, the policy-making body in the state. The Board of Forestry's Chairman said the planning program has been quite effective in this respect:

"The plan has been especially helpful to us, in better understanding the issues and each other... particularly with respect to environmental issues."

Oregon, however, is a state in which factors other than planning (e.g., economic development, environmental protection) have brought considerable attention to the forestry sector. According to the Deputy State Forester, in state election campaigning, both new gubernatorial candidates were calling for statewide forestry strategies. Such interest by policy-makers may have resulted only partially from planning, but the two are complementary in Oregon--the high level of interest by policy-makers brings greater public exposure to the FPFO, while the FPFO provides information to satisfy policy-makers needs.

In Delaware, policy-maker awareness of forestry increased "in spite of, rather than because of, state forest resource planning," according to the State Forest Resource Planner. This suggests

that the planning program was ineffective in raising policy-maker interest, even in an environment where other factors focused attention on forestry.

The political contexts in which statewide forest resource planning programs were undertaken varied considerably across the nation. Some programs faced the difficult task of trying to draw attention to forestry issues at a time when other social programs represented pressing needs. Others simply rode a tide of growing interest in forestry issues.

Programs must adapt to the circumstances in which they find themselves, being flexible and creative in developing strategies to reach policy-makers. Measures of program effectiveness should attempt to take such political contexts into account. For example, Minnesota's planning program is generally considered to have been quite effective at increasing policy-maker awareness. However, a forest industry representative argues that the program could have taken greater advantage of available opportunities:

"The information presented to the Legislature was better than it had been, but the policy recommendations were not presented very effectively. Legislators probably think that the planning program produced a series of charts and graphs rather than policy direction. Awareness was improved, and support for forestry may have increased, but the opportunity to do more was lost."

Political Support

By providing better information to policy-makers with respect to forestry issues, statewide forest resource planning programs may foster greater political support for forestry programs. Such increased support might be evident in growing budgets for state forestry organizations. A higher percentage of the respondents disagreed (32 percent) than agreed (28 percent) with respect to the achievement of increased political support (Figure 6). Although this is the lowest degree of effectiveness of all benefits identified, comments reveal that responses are confounded by the dual emphasis of the question. Increased political support for forestry programs does not necessarily mean that forestry budgets will rise, as the following comment by a forest industry representative in Colorado suggests:

"Political support has grown, but budgets have not increased--budgets have been cut instead."

Negative effects such as budget cuts can result from political or economic forces external to forestry programs. Major shifts in the external environment can require immediate attention from policy-makers, and override the needs emphasized in planning programs. Minnesota's State Forester noted just this type of situation:

"The Legislature disregards the Minnesota Forest Resources Plan under current budgetary conditions. Legislators don't like being constrained by "plans" and earlier legislative action."

Despite the disregard planning might receive under such circumstances, it still can have a positive effect relative to what might otherwise happen. Minnesota's Supervisor of State Forest Resource Planning, for example, commented that although forestry budgets were reduced, "the budget situation for the Division of Forestry would probably be worse without the plan". The Assistant Director of Minnesota's Division of Forestry agreed, seeing budget cuts as "a factor of the times" within the state's political environment. He credited planning with preventing more severe cuts:

"Planning information was effectively used to bring budget cuts down to about half of what they might otherwise have been. It made all the difference between the \$3 million cut taken by the Division and possibly a \$5 to \$6 million cut."

On the other hand, planning programs cannot always be given all of the credit when political and budgetary support for forestry programs rise. Factors other than planning programs can be responsible for increased support. This possibility was noted in Oklahoma by the State Forest Resource Planner:

"Budgets have grown, although I'm not sure that State Forest Resource Planning has had much to do with it."

California's Forest and Range Resource Assessment Program (FRRAP) presents a clear example of a planning program that gained increased budgetary support. By providing appropriate information to policy-makers, FRRAP generated interest in and obtained additional funding for research into forestry issues. Such funding was substantial, more than \$250,000 in each of the last three years. Although this research emphasis may have been unique among statewide forest resource planning programs across the nation, it provided FRRAP with a means for increasing political and budgetary support.

Communication and Coordination

Communication and program coordination might be improved through the involvement of federal, state, and local natural resource organizations in statewide forest resource planning. Fifty-three percent of the respondents agreed that communication and coordination did improve as a result of such planning. Only 9 percent disagreed (Figure 6). Comments reveal that the organizations involved varied from state to state. In some states, communication and coordination improved between the state forestry organization and the USDA Forest Service. In other states, various state agencies (e.g., departments of agriculture, environmental protection, transportation) were involved. And, in still others, state forestry organizations and private sector organizations (e.g., state forestry associations, forest industry groups, private landowner groups) were involved.

New Hampshire's State Forester acknowledged a couple of significant improvements in communication and coordination:

"Due to the state forest resource planning program, legislatively mandated cooperative agreements between the Division of Forests and Lands and other state agencies received much greater attention from the public and the Legislature than they otherwise would have. These agreements involved matters such as water quality, pest control, and tax treatment."

Their Forestry Communications Council was also expanded to include 32 organizations. The Council, which provides a means for information exchange between public and private organizations in New Hampshire, also seeks to inform and educate the general public about forestry issues.

Relations in Oregon between the state forestry department, USDA Forest Service, and the Bureau of Land Management were greatly improved as a result of efforts related to the statewide forest resource planning program. According to the Leader of Forest Resource Planning, the relationship between the Oregon State Forestry Department and the USDA Forest Service had been completely one-sided:

"Up until three years ago, the USDA Forest Service did what they wanted, whether we liked it or not."

In 1983, the Department Director (i.e., State Forester); USDA Forest Service, Regional Forester; USDA Forest Service, Pacific Northwest Forest and Range Experiment Station Director; and the Bureau of Land Management, State Director met "for the first time ever" to discuss programs in a nonconfrontational setting. Planning staff members were also present. With the help of a facilitator, participants listened to one another's concerns and began to develop mutual understanding. Planners in the various organizations developed a strong sense of mutual trust which has enabled them to begin exchanging information much more freely. As evidence of this improved relationship, the policies and activities of all three organizations were included in the Forestry Program For Oregon.

Planners in the Oregon State Forestry Department have tried to develop similarly improved working relationships with other state and federal organizations. They have been less successful at this because many other organizations do not have, and may not want, comprehensive, long-range planning programs. According to Oregon's Forest Resource Planning Leader:

"Some officials in other organizations are amazed by the fact that we are able to establish and maintain consistent policies over time ... they are amazed by the ability of a large bureaucracy to do this."

Regional Perceptions of Planning Benefits

With respect to most planning benefits, regional perceptions varied little (Appendix H-2). For two benefits, however, significant regional differences did exist (i.e., in the range of 15-20 percent). Only 29 percent of the respondents in the West perceived increased public awareness as a benefit, compared to 46 percent in the Southeast and 57 percent in the Northeast (Figure 7). This low level of effectiveness, relative to the other regions, probably reflects the fact that many planning programs in the West were agency-oriented and did not emphasize involving the general public.

The other regional difference concerns improved communication and coordination between federal, state, and local natural resource organizations. Sixty-five percent of the respondents in the Northeast perceived this planning benefit compared to only 46 percent in the Southeast and 44 percent in the West (Figure 7). The relatively high Northeast effectiveness is probably due, once again, to the prevalence there of the issue-driven planning process. A major focus of this process was broad public participation, during a rational series of planning activities.

Respondent Group Perceptions of Planning Benefits

Differences in respondent group perceptions of planning benefits might indicate a need to give greater attention to the interests of certain stakeholder groups in the next generation of planning. Several of the more significant differences are identified below (Appendix H-3):

- o State budget directors showed a much greater degree of uncertainty about planning benefits than other groups. This may reflect limited information with respect to statewide forest resource planning programs and limited time to deal with such information.

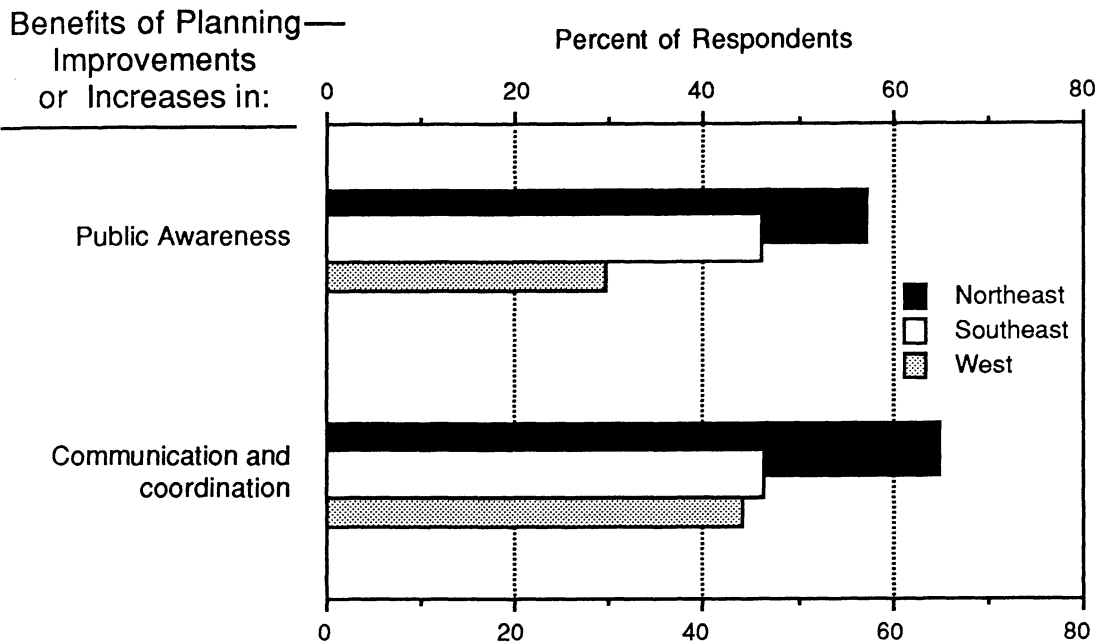


Figure 7. Regional Respondent Perceptions of Whether Key Planning Benefits Were Effectively Achieved by Statewide Forest Resource Planning Programs, 1986

- o Legislators showed a significantly higher ratio of agreement to disagreement than other groups with respect to improved authority, accountability and control systems within state forestry organizations. This may reflect a tendency of legislators to respond favorably, even though they are not very familiar with internal management systems.
- o With respect to improved decision-making processes, and anticipation and response within state forestry organizations, forest industry representatives showed a higher ratio of disagreement to agreement than other groups. This may reflect the familiarity of forest industry representatives with the bureaucratic nature of state forestry organizations. They have a strong interest in more efficient management practices in such organizations.
- o Environmental group representatives showed a higher ratio of disagreement to agreement with respect to increased political support for forestry programs. This may reflect a more critical view of the effectiveness of statewide forest resource planning programs in reaching legislators and other policymakers.

Planning Benefits by Process Type

This evaluation also explored whether the use of a particular planning process is related to perceptions of greater benefits. Each of the four process types (i.e., issue-driven, goal-oriented, interactive, and issue/goal) were cross tabulated with national perceptions of planning benefits (Appendix H-4). Results showed less variation among process types with

respect to planning benefits than was seen earlier with respect to process elements. Only two such differences are worthy of note:

- o Issue/goal processes were significantly more effective with respect to improved decision-making processes within state forestry organizations. They were also consistently more effective than other process types, although not by significant margins.
- o Interactive processes generally showed greater uncertainty than other process types, especially with respect to planning benefits that occur within state forestry organizations (e.g., decision-making processes; program compatibility; authority, accountability, and control; anticipation and response). This may be attributable to narrower participation in these processes, and greater emphasis on planning for state forestry communities at large, than for state forestry organizations.

Major Planning Effects

In addition to seeking respondent perceptions of identified planning benefits, respondents were asked what they perceived as the most significant positive and negative effects of statewide forest resource planning programs.

Positive Effects

Sixty-nine percent of all respondents cited positive planning effects in the open-ended question. The most commonly cited positive effects correlated closely with the planning benefits receiving the greatest degree of recognition in the structured questions. However, a number of other positive effects were identified as well. Summaries of these effects are given below, accompanied by selected responses:

- o Improved communication and coordination among public and private forestry organizations, resulting in greater mutual understanding and community cohesiveness.

"At this point in time, the most significant positive effect has been the cooperative efforts of a variety of special interest groups in identifying important issues and developing goals and strategies to address the issues. In many cases organizations and groups who in the past were considered sworn enemies came together to discuss items of concern and develop compromise solutions. No one got everything they were looking for in the final plan, but all interest parties had enough input that they can collectively support the process and will hopefully be willing to move forward with the implementation phase."

"Our state seems to have a more cohesive approach to forestry issues. We have a better mechanism to deal with problems, issues, and opportunities."

"Improved communication and coordination between the Division of Forestry and other DNR divisions, other state, federal and county agencies, other natural organizations, and the general public. Poor communication is at the root of most problems (including current budgetary and legislative problems), and forest resource planning has helped to reduce these problems."

"State and local government units are working more closely. The planning effort has provided visibility for the state programs, thus providing more information to local governments."

- o A means for raising the interest and understanding of legislators, other policy-makers, and the general public with respect to forestry issues, thus increasing political support for maintaining forestry programs.

"Much increased political support for forestry programs. Many more legislators now know about the opportunities for forest products industry expansion."

"Provides a means for exchange with policy-makers. Legislative staffs find the information useful in understanding the agency."

"Increased constituency building for forest resources within both the public and private sectors."

"Improved legislative and public understanding which subsequently had a positive effect on the budgeting process to enable attainment of forestry and wildlife goals and objectives."

"Until the recent revenue shortfall, the plan has been instrumental in securing additional funding for forest management."

- o A clearer sense of long-term direction in the state forestry organization through better definition of roles, responsibilities, goals, and priorities for action.

"First step toward useful long-term direction. Past planning processes have not looked to the future enough; with state forest resource planning we begin to."

"Enabled the forestry and wildlife organization to identify long-term direction and to understand relationships to the overall state plan."

"Planning has forced the Forestry Commission to look beyond the next budget year."

- o A comprehensive forest resource data base and related information for improved analysis and better understanding of resource needs and opportunities.

"We have organized a great deal of existing information and produced even more original information describing the extent, condition and importance of our resources. Based on the improved access to useful data and on organizational changes resulting from state forest resource planning, we are much more able to participate in and take the lead in forest resource related activities with other federal, state, and local agencies."

"It provides a comprehensive overview of the forestry resource...along with detailed information about the current regulatory and service programs which impact forest management."

"Basic resource data has been lacking, which is now coming on line. Such information allows the administration and Board of Forestry to take a long-term look at demographic trends with protection and enhancement implications."

- o Improved management systems within state forestry organizations through changes in administrative patterns, decision making, program planning, work planning, and accomplishment reporting.

"It has improved communication between field units and state office staff, providing each with a better view of the direction of the agency and the relative priorities given to various programs. It has gradually moved agency management style from "top down" to a more interactive process of decision making."

"The Division of Forest Environment has re-evaluated its programs in lieu of the plan. They are currently developing a detailed work program to address key issues. No such program previously existed."

"It has resulted in increased program effectiveness and efficiency by focusing resources on clearly defined, prioritized objectives and by providing a good basis for work planning and program evaluation."

- o Served as a catalyst for major forestry and forest resource development actions in the state, both in the public and private sectors.

"Our planning has acted as a catalyst for the Governor to appoint a Timber Task Force to define the problems confronting the wood products industry and to make recommendations for their solution. Planning also was a prime mover in establishing an Office of Forest Products in the Department of Commerce and Economic Development and in encouraging the Loggers Association to tend its geographical coverage... Also, planning is helping to develop an advocacy group for the development of forest resources."

- o Broadened perceptions, in terms of recognizing a greater range of perspectives and in encouraging people to think strategically about problems and opportunities over the long term.

"Brought problems and opportunities into the open for discussion that might not have come about otherwise."

"It has broadened the perceptions of foresters and other natural resource professionals regarding other points of view and issues that don't necessarily seem related to forestry."

"Broadening the spectrum of values within the Division of Forestry and the forestry community generally by addressing many concerns besides timber in a serious way."

One important positive effect that was not identified by respondents is the increased cooperation between states. Two regional forest planning groups (involving state and federal officials) have originated largely as a result of statewide forest resource planning activities. They are the Upper Great Lakes Forest Resources Planning Committee consisting of officials from Michigan, Minnesota, and Wisconsin, and the Northeast Forest Alliance consisting of officials from Maine, New Hampshire, Vermont, and New York. Such regional cooperation is an unexpected benefit that demonstrates what can occur through the expanded scope and innovative thinking encouraged by statewide forest resource planning.

Negative Effects

Although the open-ended question on negative effects received a high response (63 percent), only 38 percent of all respondents cited negative effects; the other 25 percent perceived no negative

effects attributable to statewide forest resource planning programs. Summaries of the negative effects are given below, accompanied by selected responses:

- o Costs were significant in terms of dollars and staff time, resulting in some resentment.

"... Planning, especially in the early stages, is expensive, and results take years to produce. Dollars spent on planning are not spent on more traditional forestry practices--this is a cost of doing business but could be viewed as a negative effect."

"A tremendous amount of staff time has been spent on learning the process and carrying it out--unavoidable and not inappropriate but still costly."

"The initial plan turned-off many participants...for the most part, wasted \$100,000 of Forest Service money."

"A lot of effort, time, and money spent for little return--a waste of time and money!"

- o Poorly executed planning (e.g., inadequate involvement, complicated process, confusing, endless effort) resulted in a loss of respect for forestry organization and diminished prospects for future planning programs.

"Not getting the plan finalized and published has caused some eyebrow-raising and embarrassment."

"It took us eight years--that hurt. We lost a lot of momentum."

"Planning has gotten a black eye because the process was so dragged out and inconclusive."

"The long, drawn-out period of training staff as planners, and the frequent changes in direction and thrust of planning did not enhance the status and stature of planning among leadership and rank-and-file state forestry department personnel."

- o Political and economic forces beyond the control of the state forestry organization wrought havoc with the organization's structure or budget, frustrating the objectives of the planning program.

"Because of the policy changes and resulting reorganization of our bureau during the planning process, enthusiasm for state forest resource planning has declined."

"Public and legislative frustration due to budgetary constraints to achieving planning objectives in the near term."

- o Sensitive issues were raised during the planning process, leading to problems for the state forestry organization and greater conflict between certain interest groups.

"The planning process has alerted certain ultraconservative environmental groups, thus giving them the opportunity to develop strategies to block specific programs of forest resource development."

"Increased polarization of commodity vs non-commodity interests. The commodity interests are served by a widely-debated plan, while those favoring non-commodity values feel that they have had little voice."

"It has identified some key issues that will be unpleasant for us to try to change without serious political consequences."

"As we complete the forest unit plans, controversial issues that might have been avoided (without significant harm to the resources) are forced out into the open. This has caused problems with local citizens and government."

- o Planning raised great expectations that have not been, and probably cannot be, fulfilled.

"There are always a few who think that a program is going to achieve 100% of its objectives, and when it doesn't, they get disenchanted."

"The expectation of agency people that planning would enhance legislative/public understanding did not become a reality."

"Established unrealistic expectations for growth in programs and budgets which will not be realized soon because of budgetary constraints."

- o Despite considerable time and money invested in planning, programs may fail to gain commitment over the long run, resulting in frustration.

"It has proven to those involved that even though you do everything correctly, work hard, and produce a planning document, planning may not have any effect on the future of the forestry agency or forestry itself."

"When federal funding for planners terminated, the planning function was dropped (i.e., not funded by state appropriations), so there is little or no follow through on planning except as may be required for budgetary planning."

- o Planning constrains decision-making and may frustrate managers who are accustomed to greater freedom and flexibility.

"Field managers resist planning because it takes work priority decision-making away from the local managers and fosters a joint negotiating process between field and state office."

- o Planning implies increased government involvement in the private sector, carrying with it the threat of more regulation.

"There is a perception by private industry of the possible regulation of forestry because of the planning program."

CHAPTER VI

PERFORMANCE OF STATEWIDE FOREST RESOURCE PLANNING

Assessments of planning performance measured how well planning programs have been carried out relative to the expectations of various stakeholders. According to King (1983), expectations of planning programs provide one of the most useful bases for judging actual performance. In a sense, they take into account the planning context in each state, thus representing an equal means for comparison.

Significant Performance Measures

Unlike previous assessment elements (i.e., process elements, planning benefits), performance measures inquired about general rather than specific perceptions of planning programs. For example, respondents were asked about the importance of planning programs, or satisfaction with planning processes, rather than more specific criteria such as goal development or decision-making processes. To facilitate interpretation of performance assessments, open-ended questions were used in conjunction with structured questions. This gave respondents an opportunity to explain or qualify their responses. Results from the assessment of performance measures are presented in appendices I-1, I-2, and I-3.

National Perceptions of Performance Measures

The vast majority of respondents (75 percent) perceived planning importance to be high (Figure 8). This represents a significant endorsement for the need to continue statewide forest resource planning, despite difficulties encountered in many first-generation programs.

Among other measures, purpose fulfillment, process satisfaction, and satisfaction with goals, objectives, and strategies were perceived favorably. However, with respect to adoption and use, and progress toward implementation, planning programs were perceived to have performed less well. This may be partially explained by the recent completion of most planning programs, but it is also due to inherent difficulties in gaining acceptance and effecting implementation.

Uncertainty with respect to performance measures carries interesting implications. It is different than that related to more specific assessment elements (i.e., process elements, planning benefits). Here, uncertainty suggests that respondents are not well-enough informed to have an opinion on even the most general questions about statewide forest resource planning. This may reflect disinterest among some respondents, but it also reveals an opportunity for planning programs. The majority of informed respondents viewed planning performance favorably. By failing to inform stakeholders, planning programs missed the opportunity to generate greater support.

Importance of Planning

Seventy-five percent of all respondents considered planning programs important to the interests of forestry in their states. This represents very strong support for planning programs across all respondent groups. However, it also suggests that these respondent groups, being major stakeholders of statewide forest resource planning programs, had an obvious bias in favor of such programs. Further, the fact that respondents indicated planning is important does not necessarily mean they were not critical of such programs. In fact, they may have been very critical since their interests were at stake.

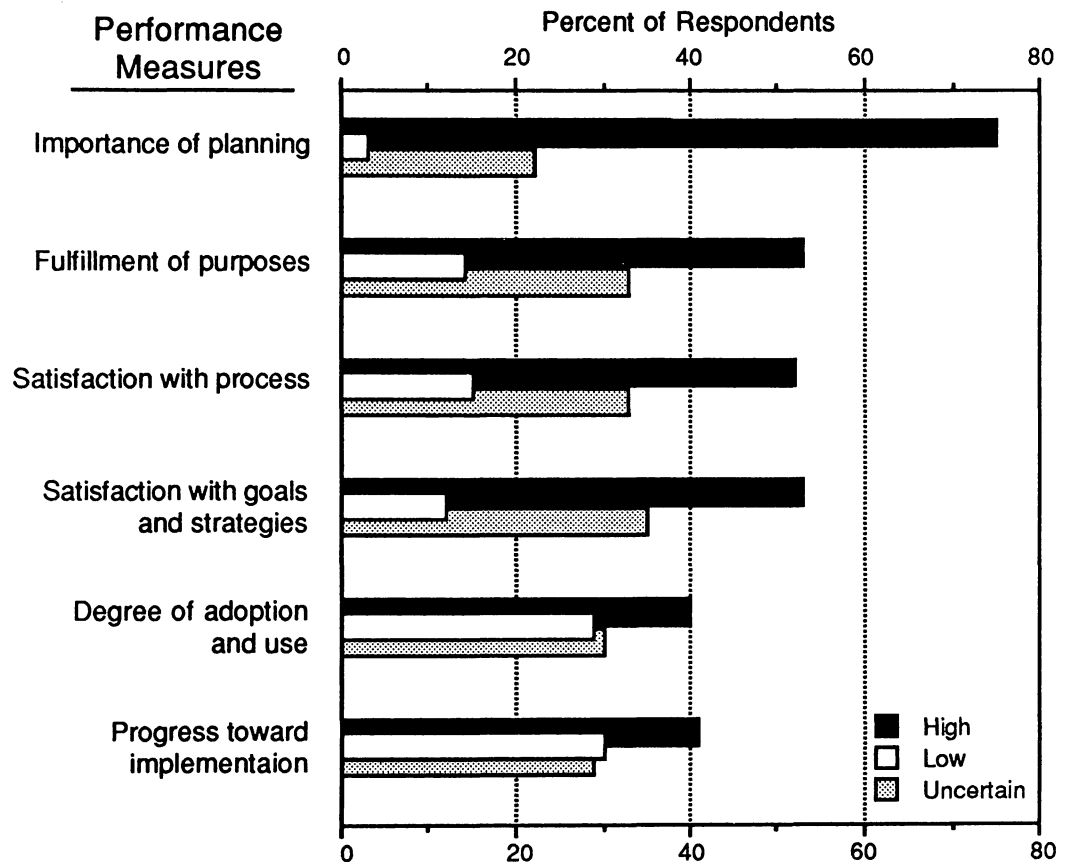


Figure 8. Respondent Perceptions of the Degree to Which Statewide Forest Resource Planning Programs Met Certain Performance Measures, 1986

A number of respondents expressed uncertainty about the importance of statewide forest resource planning programs. They had sufficient interest in planning programs to respond to study inquiries despite their lack of awareness. Several respondents also indicated that they perceived such programs to be important, though they knew little or nothing about them. For example, Minnesota's State Budget Director made the following comment:

"Although I feel planning is very important, I am unfamiliar with this particular effort."

Such levels of interest among respondents unfamiliar with statewide forest resource planning suggest that improvements can and should be made in the way information is disseminated.

Respondents were also asked whether their perceptions of planning's importance have changed since the outset of such planning, and if so, how. Thirty percent said their perceptions have changed, two-thirds of whom indicated planning's importance was now increasing. Summaries of the responses are given below, accompanied by selected comments:

- o The information and improved understanding of needs and opportunities have exceeded expectations and enhanced the importance of planning.

"I initially felt that it was a bureaucratic hoop that the U.S. Forest Service was strongly urging us to jump through. It has, however, provided us...with a great deal of knowledge about the importance of even our small forest resource base and helped to provide some goals for our agency."

"I always viewed it as important, but my experiences...have shown me that planning is desperately needed by state forestry agencies, especially in states and field administrative offices that have not done much previous planning."

- o Increasing levels of public interest in forestry and growing demands for forest resources continue to increase the importance of planning.

"The widespread interest and support for forest planning and management generated by the process was unanticipated."

"At the outset I was seeking an improved set of output targets for public land management. During planning, the crisis of the heavy-industry economy of the Industrial Crescent occurred. The statewide forest resources plan became an important element of state strategy (i.e., Governor, Legislature, etc.) to develop and diversify the economy."

- o Less confident of the ability of "comprehensive" state forest resource planning to succeed because it requires broad public involvement and strong commitment. Agency planning may be the only feasible type of state forest resource planning.

"Importance lessened as it became more and more evident that state forest resource planning was to be a 'program plan' rather than a true 'resource plan'."

"At the start I felt it was needed. Now I see where things still get done without it, though perhaps not as well. There is no place for this planning unless the powers that be want to use it."

- o Had great hopes for further support and funding for forestry programs as a result of planning, but few public officials have paid much attention.

"At the inception, it appeared that the plan would be meaningful; however, the public meetings were poorly attended, and since the plan has been published, there has been very little reaction to it."

"The formal planning process has been so dragged out that it has had virtually no impact, (i.e., its importance is diminishing). The need for planning remains."

Purpose Fulfillment

Initial purposes for undertaking statewide forest resource planning programs varied from state to state. Some states had fairly standard, broad purposes (e.g., establishing long-term agency direction, justifying forestry budget allocations) while others had more unique and specific purposes (e.g., developing internal work-planning processes or new forestry programs). Another

measure of performance is how well planning programs have served the purposes for which they were intended.

Fifty-three percent of all respondents perceived planning programs as having been effective in fulfilling initial purposes (Figure 8). This represents fairly strong performance, especially when compared to the low percentage of respondents (14 percent) who perceived planning programs as having been ineffective in this respect. The remaining respondents (33 percent) expressed uncertainty about purpose fulfillment. Comments reveal that many respondents are of the opinion it is "too early to tell," since implementation efforts have only recently begun. Some, however, indicated that initial purposes for planning were never articulated; thus they were unable to assess the degree of fulfillment.

In many states, statewide forest resource planning programs were seen as learning experiences, and, despite certain problems, respondents maintained the perspective that such programs were only the first in a continual series of planning efforts. Colorado's State Forest Resource Planner presents this perspective:

"We have viewed state forest resource planning as an evolutionary phenomena. As such, we started our outfit up the learning curve fairly gently, and with good results, I think. The next cut, beginning in 1987, will likely result in a better product and clearer results."

Process Satisfaction

Respondents were asked whether they were satisfied or dissatisfied with the planning process used in their state, and encouraged to explain why. Fifty-two percent indicated satisfaction with their state's planning process; only 15 percent indicated dissatisfaction (Figure 8). This reflects generally favorable perceptions of planning performance among respondents knowledgeable enough to be able to express an opinion. Most respondents provided brief explanations of their response, which are summarized below:

- o A well-conceived process giving all organizations and individuals in the forestry community an opportunity to get involved. Arrived at considerable consensus regarding important forestry issues, goals, and strategies.

"I felt all the necessary steps in planning were taken, a lot of good thought went into the process, and all publics had the opportunity to comment on the plan. It was, in final form, a good positive work."

- o A good effort for the first time. Process and product represent great improvement over previous practices.

"I have only to look back to the time we had an inadequate process to be satisfied with what I believe to be tremendous progress in planning."

- o In view of the time and budget constraints, the process was very good.

"Based on the resources available to us, we did an adequate job, complied with the RPA request from the U.S. Forest Service and helped...determine our direction for forestry within the state."

- o Both technical analysis and public input were used to identify problems and develop goals and strategies.

"The effort illustrated the problems we face and the means to overcome them. It used technical evaluation as well as public participation."

"Good use was made of analytic talent, primarily in our universities. A public involvement was also used that indeed helped to form consensus (i.e., this process was quite different than that used by the U.S. Forest Service)."

- o Impressed with many elements of planning but remain doubtful about implementation prospects.

"The process was great! I'm just dissatisfied about the follow-up and implementation. Since the Governor called our conference, I felt he should have required continuing progress. Possibly I should have felt the same responsibility for me!"

"Satisfied that certain elements were accomplished but not satisfied with the results following the development of the state guide plan. We presently are working on the implementation stage, however, we do not expect positive results."

- o Failed to provide adequate information or opportunity for involvement to the forestry staff or the general public, especially at the outset.

"The State Forest Resources plan did not receive adequate attention to ensure a well-rounded document. It resembles an assessment of resources and programs rather than a forecasting document. The public involvement in the development of the document was negligible."

- o Too narrowly focused, therefore generated little support.

"Planning has been too oriented toward next year's workplan rather than long-range planning...it is still perceived as something to do for the Office of Planning and Budget rather than as something of benefit to forestry and its role in the state economy."

- o Did not generate sufficient interest and commitment from policy-makers (e.g., Governor, legislators, other state officials).

"If I could start over again, I'd get the governor and the two legislative leaders to pick a committee to do this (i.e., follow the planning process) so they would pay attention to the results. We had a Legislative Conference but it really didn't get the legislators listening, just making speeches. We also ended up with strategies that were generally at the further bleachers of the ball park. The agency staff, for one reason or another, didn't get across the exact message--but this is a common experience with these citizen involvement projects."

- o Controlled by forestry personnel and particular forestry interests.

"The process was dominated by production-oriented forest interests, with little impact felt from broad-spectrum interests in forest use, management and protection."

- o Excessively long and costly.
- o Lack of continuity--planners, issues, objectives, constantly in a state of flux.

Case study interviews reveal some common areas of tension in various states' initial planning processes. Perhaps most significant is the tension between obtaining adequate levels of involvement and maintaining a logical, timely schedule. New Hampshire's former State Forester remarked on the excessively broad scope of the initial planning process:

"The initial process and plan tried to cover everything, and resulted in far too many, diverse recommendations. Because of this, it was a year and one-half late. The Interim Report, on the other hand, set a deadline and met it. This update is a very good, workable, practical plan. Although the first process was somewhat frustrating, it proved to be a valuable learning experience."

The Assistant Director of Minnesota's Division of Forestry recognized a similar problem in the scope of the initial planning process used in his state:

"The issues and strategy statements were identified through a democratic process, with lots of opportunities for input. As a result, the process was not very pragmatic...the flows of information tended to hamper the process."

Another tension is evident between the appropriate emphasis on statewide strategic planning as opposed to internal agency planning. In New Hampshire, the State Forester was quite content with the manner in which the planning process addressed statewide forestry interests, but less happy with internal involvement:

"I was very pleased with the initial process, especially the degree of local involvement. I'm not sure, however, whether the Division's field people were adequately involved in the process or brought in early enough. The five Section Chiefs were greatly involved, and developed a much better team relationship as a result, but the field people could have been more involved."

The President of the Society For the Protection of New Hampshire's Forests, perceived the situation quite differently:

"There was no private interest input initially with respect to what planning process to use--the Division determined it [and] the process was too long and dominated by the Division of Forests and Lands."

The initial planning process in Minnesota raised similar questions. Their Assistant State Forester expressed some doubt about how well the planning process addressed interests outside of the Division of Forestry:

"The mission of the Minnesota Forest Resources Plan was to bring together and address the needs of all forestry interests in the state. Perhaps the State Forester needed to take off his Division Director's hat and put on his Forestry Leader's hat in order for us to do so. We made a good attempt to bring in outside interests, but perhaps we didn't say 'This is your plan; we have a piece of it, but we all have to get together to prepare a document and commit ourselves to it.' Instead we told them what we were thinking about doing. We need to make a better attempt at doing this statewide plan next time."

Also worthy of note is a third tension, existing between strategic, or policy-related planning and land management planning. Minnesota's state forest resource planning program is currently producing a series of unit plans or land management plans, which are coordinated with the goals and strategies of the statewide plan. A comment by the former Executive Director of Minnesota's Forest Industries reveals that land management planning can result in greater conflict:

"The forest industries were initially concerned about statewide forest resource planning, but the Division was genuinely solicitous and responsive to industry comments in the planning effort. Now, however, because of the larger staff involved with unit planning, the planning program seems to be less responsive, which has led to increased tension."

The suggestion that increased staff-size has led to decreased responsiveness may be partially correct, but the increased tension may have resulted more from the fact that land management planning involves decisions affecting identifiable parcels of land. Conflict is much more likely with such specific decisions than with broad, policy decisions associated with statewide planning.

Interest in statewide forest planning programs may be greater and more widespread than many planners realize. New Jersey's State Budget Director reveals an opportunity that seems to have been overlooked in that state:

"My office has not been involved directly in the process. Your questionnaire along with my commitment to strategic planning may result in more involvement. The forestry program uses but a small portion of the state's general fund resources and therefore does not get the intensive scrutiny of the Budget Office."

Although some planners might not want their programs to be scrutinized by the state budget office, such attention may be desirable since it can increase the legitimacy of the planning program. Planning's legitimacy has been enhanced by such scrutiny in Arizona, as stated by the State Budget Director:

"The plan shows that the agency has given adequate attention to establishing priorities and assessing the resources needed to meet the objectives. From the central budget office perspective, the plan has increased our confidence that the agency is using their resources effectively."

Many policy-makers realize the complexity of such comprehensive planning programs and appreciate reasonable results. The Assistant Commissioner of Minnesota's Department of Natural Resources notes this:

"It was an efficient, relatively inexpensive process that yielded a useable product."

Although Minnesota's statewide forest resource planning program was one of the larger and more expensive in the nation, it can be perceived, within its own context, as efficient and inexpensive.

Satisfaction with Goals, Objectives, and Strategies

Statewide forest resource planning programs were expected to produce certain outputs. Some were discussed as planning benefits, others as goals, objectives, and strategies developed through planning processes. Respondents were asked whether they were satisfied or dissatisfied with the

goals, objectives, and strategies, and why. Because of the difficulty in distinguishing between goals, objectives, and strategies, they were merged for analysis.

Fifty-three percent of the respondents were satisfied with goals, objectives, and strategies. Only 12 percent were dissatisfied (Figure 8). Comments suggest that satisfaction with respect to goals, objectives, and strategies was largely dependent on self-interest or personal perceptions as to what was appropriate, more so than with respect to processes.

One respondent's reason for satisfaction was just as likely to be another's reason for dissatisfaction. For example, some respondents remarked that goals were too broadly defined while others said they were too narrow. Or some respondents argued that multiple-resource values were given too much attention while others indicated they were given too little. Summaries of the comments are presented below, accompanied by selected responses:

- o Goals, objectives, and strategies were developed through considerable public involvement. Perhaps they could be better, but they represent a good initial effort.
 - "Goals cover a wide spectrum of possibilities. Goals, actions and accountability are clearly defined. Especially important is the inclusion of a time horizon for each goal."
 - "I feel the plan represents a broad-based consensus of what needs to be done to expand the potential of the state's forest resources. Moreover, I feel this consensus will help us significantly implement plan recommendations."
 - "It was a consensus plan. Therefore, it is difficult to be critical or to blame any individual or agency. Any one individual might want more or less of something, but recognizes and accepts the group consensus decision."
 - "The goals, objectives and strategies were well-integrated and to the point. They provide a good guide for program development and implementation."
 - "They have assessed the problems well and taken conservative and appropriate steps--but have left opportunity for reassessment with changing conditions, unforeseen problems and redirection in finances."
- o Although the goals, objectives, and strategies were appropriately developed, political and economic forces have made funding and commitment to implementation uncertain.
 - "The process clearly showed what needs to be done to adequately fulfill our mission and serve the public--however, the political process has prevented it from happening."
 - "Everything was done by the numbers, a very noteworthy document was completed. However, shortly before publication, the bottom fell out of the state budget and our agency was mandated layoff procedures. This discouraged all participants and "crisis management" became the name of the game. We still haven't recovered."
- o Mixture of realistic, clearly-defined goals, objectives, and strategies, and wishful, vague, unsupported goals, objectives, and strategies.
 - "There seems to be a mixture of dreams and real-world that is hard to sort out."

- o Goals are too general and contain no time-frames.

"Goals were unclear, poorly articulated and too general to be followed."

"Goals and objectives are general in nature, and do not have attainable (defined) time-frames for completion."

- o Goals, objectives, and strategies are too narrow and short-sighted, primarily reflecting the interests of current programs in the state forestry organization.

"The plan does not develop goals and objectives based on the condition or needs of the resource. It is built around carrying on current programs."

"They are Division-oriented. Many of the goals, objectives and strategies are weak, not far-reaching in making substantial impacts on forestry in the state."

"Reflect the agency's self-concerns, not those of others."

- o Goals, objectives, and strategies do not adequately recognize certain values (e.g., timber production, wildlife, recreation).

"The economics of forest product production are not recognized for their full potential in comparison to wildlife habitat and fisheries "protection" and to recreation and scenic values."

"Failed to accept the responsibility to protect wildlife, gene pools, a modest amount of old growth, or sustained yield by basins or blocks, but only for the whole state."

Case study interviews reveal that planning programs sometimes had difficulty connecting issues, goals, objectives, and strategies in a logical fashion. This was especially true in states that used comprehensive issue-driven processes, such as New Hampshire and Minnesota. An additional problem was the proliferation of goals and objectives resulting from concern over incorporating everyone's input. Remarks by state forest resource planners from New Hampshire and Minnesota, respectively, illustrate similar problems:

"I feel that a lot of the content was good, but as one of our participants put it, the plan was like a wishbook. There was no clear enough underlying theme, not enough pathway between goals, objectives, and strategies. It was a collection of good ideas."

"In the 1983 Minnesota Forest Resources Plan, goals were not program goals, but rather artificially created goals that matched the issues. Objectives and strategies were more realistic, and I was reasonably satisfied with them, although there were far too many objectives and the strategies could have been more comprehensive."

Finally, New Hampshire's State Forester made a comment that partly explains the multitude of goals and objectives. It also expresses a desire for greater creativity and broader thinking:

"Goals and objectives in the 1982 plan were less innovative than they could have been. Many people seemed to have only their self-interest in mind."

Adoption and Use

Another measure of planning performance is the degree to which a plan is adopted and used by those for whom it is intended. For a number of reasons, individuals are often reluctant to accept planning programs or their products. Some have little faith in planning. Others are threatened by the prospects of change. Many perceive reduced freedom and flexibility. Respondents, other than state forest resource planners, were asked how often they use statewide forest resource plans when making strategic decisions related to forestry.

The performance of planning programs with respect to adoption and use is relatively low compared to other measures. They were used quite frequently by 40 percent of the respondents. Only 29 percent rarely used them (Figure 8). In part, this low use is caused both by the considerable difficulty of obtaining widespread use, and also by the only recent completion of many plans. A fairly common situation is noted by New York's State Forester:

"We are only just beginning to utilize the Plan for decision-making. Hopefully in time we will use it often."

As one might expect, state foresters used statewide forest resource plans more often than other respondent groups (Appendix I-3). One of the most common uses by state foresters, and other high-level administrative officials, was for testimony at legislative hearings. The Assistant Commissioner of Minnesota's Department of Natural Resources recognized this:

"I use it in explaining forestry programs and setting priorities. I also wave it in front of the Legislature at hearings, seldom using the details, but rather assessment information and policy implications. Most relevant legislators are aware of the plan and have received it well."

The degree to which statewide forest resource plans are being used in outside organizations is uncertain. Some respondents outside of the state forestry organization said they used plans frequently, but indirectly:

"It affects me without pulling it off the shelf."

"I check with the Colorado State Forest Service and the U.S. Forest Service to maintain dialogue, but don't actually check the state forest resource plan."

"I have not specifically used the plan, but from past familiarity with its development I feel sure that unconsciously or subconsciously I have used some of the findings and recommendations."

Current monitoring efforts, as in Minnesota, Mississippi and New Hampshire, are working to discern whether outside organizations are responding to planning recommendations. New Hampshire's Chief of Forest Information and Planning stressed the need to encourage outside organizations to adopt the recommendations as their own:

"Because the plan is a community plan, we must try to reach the leaders of outside organizations before they write their work plans so that they will be sure to incorporate broad, statewide planning goals and recommendations."

The most frequently cited uses of statewide forest resource plans within state forestry organizations were for program planning, work-planning, or internal budgeting. Many states have

had considerable success incorporating information and direction from statewide forest resource planning programs into program and work planning. Minnesota's Assistant State Forester referred to the relatively recent success of the work-planning and accomplishment reporting system implemented as part of the Minnesota Forest Resources Plan:

"Field people have not responded negatively toward the new work planning and accomplishment reporting system...work planning is built into their job description and has been accepted quite well as one of the required activities."

The Forestry Plan For Oregon has been in existence since 1969, a relatively long time. Their Forest Management Leader suggests that a general perception of its usefulness exists throughout the Department of Forestry:

"All programs, perhaps other than Forest Management (i.e., on state lands) and Fire Protection have benefited from comprehensive planning.... Planning has been around long enough so that people probably would not want to do without it."

In many states, statewide forest resource planning programs are still trying to gain acceptance within the state forestry organization, especially among field people. The latter often view themselves as being too busy to take on the additional work related to planning. They may also perceive planning to have limited value. However, such attitudes can change, as noted by Wisconsin's State Forester:

"At the outset it was considered an add-on...a chore. By completion, attitudes had changed and its value had been recognized."

An important task for statewide planning programs is "marketing" the program to field people--demonstrating the benefits it provides. Comments by California's Deputy Director for Resource Management, and Mississippi's Forest Protection Chief, respectively, reflect similar perceptions:

"Once the new assessment is finished, the Forest and Range Resource Assessment Program (FRRAP) needs to educate forestry managers...to give briefings on what assessments can do for them and what the FRRAP can provide in the future. The more progressive managers will recognize the advantages of using FRRAP information for their own budgetary arguments."

"Contrary to the perception that planning is a bother, I believe that planning is underutilized. One role of the planner is to show the regular staff how useful planning data can be, to encourage them to plan as much as they can. If field people can see the fruits of data collection and analysis, they will be receptive to the idea of planning."

New Hampshire's statewide forest resource planning program has changed their approach to getting field people more involved, to ensure that statewide goals received appropriate recognition in work planning. The Chief of Forest Information and Planning explained the change:

"This year, 1986, will be the first time that our planner will sit down with field foresters as work plans are being written, in order to incorporate broader planning goals. In the past, due to timing problems, work plans were always written before broader goals were established."

Besides internal planning, the information produced through statewide forest resource planning has been used for a variety of other purposes, as comments illustrate:

"The plan has been the basis for Board of Forestry, Forest Service and University action on several occasions."

"When U.S. Forest Service funds for special projects become available, the plan is referred to during development of project proposals."

"The State Forester claims that he uses the plan as a guide. However, greater use of the plan is anticipated within a year when a new State Forester is expected to take over."

"Goals for federal lands; private landowner programs; target industry development; forest resource development programs."

Progress Toward Implementation

The final measure of planning performance focuses on implementation--the accomplishment of goals and objectives identified in statewide forest resource plans. Some accomplishments may overlap with planning benefits identified earlier. In general, however, accomplishments are more specific and concrete in nature. Respondents were asked to assess the degree to which progress has been made toward achieving such goals and objectives, and to give examples of such accomplishments.

Considerable progress was perceived by 41 percent of all respondents. Little or no progress was seen by 30 percent (Figure 8). The fact that performance with respect to progress toward implementation was relatively low (similar to that for adoption and use) may be explained by both the difficulty of translating goals and objectives into action and the limited time most states have had for plan implementation.

Perceptions of accomplishments related to planning goals and objectives varied considerably from state to state and among respondent groups. Some were very specific or programmatic, as exemplified by Minnesota's Supervisor of State Forest Resource Planning:

"Numerous program-specific examples are available by reviewing annual accomplishment reports from 1984 and 1985."

Other perceptions were broader or policy-oriented, as in this response from the Executive Director of California's Board of Forestry:

"FRRAP was instrumental in focusing attention on the question of managing hardwoods, which resulted in \$1 million in research and extension funding. FRRAP will administer \$350,000 in research money, and \$650,000 will go to the University of California for extension work with ranchers."

A representative sample of the range of accomplishments is presented below, with reference to pertinent states:

Alaska

Has established two state forests where before it had no land base secured for forest operations.

The state has established an Office of Forest Products within Commerce and Economic Development.

Colorado

Better communication between state and industry.
Lobbying efforts started.

Florida

Establishment of additional tree nursery capacity and improvement of management.
Development of an organized, monitored annual work planning process.

Hawaii

Wildlife and endangered species program plans are now on hand.

Indiana

In the recommended program direction, goals to be reached by 1988 have proceeded satisfactorily.
Since 1981, five additional CFM foresters, two educational specialists, ten consultant foresters, and one computer specialist added.
On target to reach cooperator and applied forest practice goals by 1988.

Iowa

Public land acquisition recommendation followed by initiating a new state forest.
Governor appointed an Arbor Day Committee as recommended.
Cost-share program for woodland fencing was recommended and adopted.

Massachusetts

State Extension Forestry faculty position restored at the University of Massachusetts.
Funding obtained to complete the Prime Timberlands Inventory and Mapping Project statewide.

Michigan

Progress held back by state fiscal difficulties, but more achieved than would have otherwise been possible.
Creation of Governor's Target Industry Program.

Minnesota

Reforestation increased dramatically.
Acceleration of forest road maintenance, construction and reconstruction.
Interdisciplinary cooperation significantly improved.
Multiple-use management improved.
Outdoor recreation given greater attention.
Wildlife values enhanced.

Montana

Program objectives budgeted for realistically and used to drive annual work planning process.
Program objectives routinely accomplished.
State forestry organization managing to operate without the below cost sales which plague U.S. Forest Service--sometimes in next door areas.

New Hampshire

Hiring of Wildlife Specialist by Extension Service.

Forestry Communications Council activities as recommended.
 Increased conservation taught in schools (Project Learning Tree).
 Re-structuring of Division's Citizen Advisory Boards.
 Passage of State Forest Resources Planning Act.
 Changes in timber tax reporting procedure.

New York

Implementation of a Cooperating Timber Harvest Program.
 Post harvest evaluations conducted.
 Establishment of Empire Forest System.
 Development of Timberland Productivity Rating System.
 Approximately 60 percent implementation of strategies.
 Bond Act proposed by the Governor incorporates one of the strategies.

North Carolina

Insurance of uniform enforcement of forest fire laws.
 Established system to coordinate efforts of volunteer fire departments.
 Produced series of publicity articles about Best Management Practices.
 Improved effectiveness of the Forest Pest Detection System.
 Many changes made in budget requests.

Oregon

Timber taxation reform completed in 1979.
 Slowed rate of conversion of forest land to developmental uses.

Pennsylvania

Harvest of 89% of allowable cut is sharply up from 5 years ago.
 Generated some expansion of forest products industry.

Vermont

State Use Value Tax Program gaining broader political support.
 Public involvement program underway for state lands.
 Consulting forester association being formed.
 Focused grant awarded from U.S. Forest Service, to develop market and promotion program.
 Joint training programs scheduled with Regional Planning Agencies.

Wisconsin

Plan used by Governor's Strategic Planning Committee, for forest industry analysis and state economic directions.
 Accelerated planting program on schedule.
 Timber harvests increasing.
 "Set Aside" designations made.

Case study interviews reveal that respondents sometimes recognized significant accomplishments not identified in survey responses. For example, few accomplishments were mentioned in Mississippi's survey responses, perhaps due to the recent completion of the statewide forest resource plan. During the interviews, however, several respondents cited accomplishments. The State Forest Planner mentioned one specifically and showed considerable optimism about others:

"My view is that a lot of things will be accomplished. Some already have been, such as the completion of the economic development publication."

The Executive Vice President of the Mississippi Forestry Association also mentioned several planning accomplishments during his interview:

"Some tasks have been accomplished to some degree, for example, improved reforestation and increased landowner contacts through coordinated efforts of the Mississippi Forestry Association, Agricultural Extension Service, and the Forestry Commission. Forest Productivity Committees have been set up in each county to encourage reforestation and improved management, largely through education. Also, there have been some unforeseen achievements stemming from Pathways: severance tax receipts have been partially redirected to reforesting school lands, and limitations on funds to be used for reforesting individual landowner tracts have been raised."

In Oregon, as well, significant accomplishments not cited in survey responses, were attributed to the planning program during interviews. Several interviewed respondents credited planning with the development of a new program in forest product marketing within the Oregon State Department of Forestry. The Forest Resource Planning Leader described events this way:

"Marketing development was not in the 1977 Forestry Program For Oregon (FPFO), but because of the emerging need, it was recognized in the 1982 FPFO. The Governor's Office became a strong advocate of marketing. With this type of support, the Department was able to obtain funding for the program through the state legislature."

Another major Oregon accomplishment discerned during an interview was the resurgence of the Service Forestry program in the Department of Forestry. The Associate State Forester cited the achievement:

"The Service Forestry Supplement to the 1977 FPFO brought the program back to life. The program grew from 3 to 12 full-time equivalents, and accomplishments jumped considerably."

The Chairman of the Oregon State Board of Forestry also perceived this expansion as a significant accomplishment:

"The growth of the Service Forestry program has been well justified. In fact, I wish it could be expanded further. Improvements in small woodland management and wood growth have been tremendous."

Finally, one of the most profound accomplishments attributed to a statewide forest resource planning, by many respondents, is the enhanced stature of Virginia's state forestry organization. Largely as a result of information produced and distributed by the planning program (documenting the importance of forestry to the state economy), the state forestry organization was elevated from a division within the Department of Conservation and Historic Resources to an executive-level department in its own right.

Regional Perceptions of Performance Measures

The data was examined for differences in perceptions of performance measures between the Northeast, Southeast, and West (Appendix I-2). No significant regional differences were found, suggesting that perceptions of these broader measures may be less distinctive.

Respondent Group Perceptions of Performance Measures

Differences between respondent group perceptions of performance measures were examined (Appendix I-3). Several significant differences are identified below:

- o State forest resource planners and state foresters expressed much higher satisfaction with planning processes (15-20 percent higher than other groups) and generally perceived greater effectiveness with respect to other performance measures.
- o State foresters used statewide forest resource plans much more often than other respondent groups (excluding state forest resource planners). This might be expected, since state foresters are a primary stakeholder in such planning programs.
- o Environmental group representatives perceived less effectiveness with respect to most performance measures, especially purpose fulfillment and progress toward implementation. This may be so since the expectations of these respondents were more specific.
- o State budget directors revealed much higher uncertainty than other respondent groups, even with respect to broader performance measures. This indicates a very low level of awareness with respect to statewide forest resource planning programs.

Performance Measures by Process Type

Performance measure data was also examined for differences between the effectiveness of various process types (Appendix I-4). Two significant differences were discovered:

- o Issue/goal planning processes were related to significantly greater process satisfaction and satisfaction with goals, objectives, and strategies. Furthermore, such processes showed consistently better performance with respect to other measures.
- o Interactive planning processes were associated with greater uncertainty, especially with respect to purpose fulfillment; satisfaction with goals, objectives, and strategies; and progress toward implementation. Such uncertainty may be attributable to limited participation in the process. However, high uncertainty with respect to goals, objectives, and strategies suggests that respondents may have been unclear about outputs.

Performance Measures by Context Elements

Finally, a number of hypotheses were examined by cross tabulating context variables and performance measures. For example, the study examined whether higher planning budgets were related to greater process satisfaction, or whether a particular planning purpose was related to greater purpose fulfillment. The context variables that were cross tabulated with performance measures include:

- o Initial planning purposes
- o Planning budgets (1981 and 1985)
- o Planning staff (1981 and 1985)
- o Time available for planning
- o Technical complexity

- o Political support by key constituents at start and completion

Initial planning purposes, planning staffs, and time availability were found to have little or no association with performance measures. Some of the findings for planning budgets, technical complexity, and political support, however, are worthy of note:

- o Higher planning budgets may be associated with greater performance. Fifteen states with the highest budgets in 1981 and 4 states with the highest budgets in 1985 were consistently associated with higher levels of performance. Variations in the timing of these programs and fluctuations in planning budgets made interpretation of such findings difficult.
- o Higher degrees of technical complexity were associated with perceptions of greater performance among state forest resource planners and state foresters. This suggests that more technical analysis may be desirable for future planning.
- o High levels of political support by various constituent groups at the end of planning programs were strongly associated with high performance. No single constituent group (e.g., Governor, Legislature, State Forester, Forest Industry, etc.) was most critical to success. Rather, broad support from all groups appeared to be important for high performance.

CHAPTER VII

SUMMARY AND CONCLUSIONS

A model for strategic planning evaluation was applied to statewide forest resource planning programs across the nation. Involved were a survey of multiple respondents groups (i.e., state forest resource planners, state foresters, administrative officials overseeing state forestry organizations, state budget directors, legislators, forest industry representatives, environmental group representatives) in 48 states and case studies of 5 state programs (i.e., in New Hampshire, Mississippi, Minnesota, Oregon, California).

Various measures of planning effectiveness were identified and assessed within four assessment components: context, process, outputs, and performance. Assessments revealed great diversity in planning environments, processes undertaken, and actual experiences.

Planning programs, by and large, were perceived to have effectively addressed the process elements considered important in such planning. Numerous benefits were perceived to have accrued to state forestry organizations and state forestry communities, and much was learned through first-generation planning efforts, through failure as well as success. Summaries of the research findings and implications for future planning programs are given below.

Program Definitions

A fundamental problem in evaluating forest planning efforts at the state level is the lack of a formal definition for a "statewide forest resource planning program." Such programs are extremely diverse. Their magnitude and scope vary dramatically from state to state. They operate within different planning contexts, undertake different planning approaches, and pursue different goals, objectives, and strategies. For purposes here, statewide forest resource planning programs are broadly defined as those prompted by the Cooperative Forestry Assistance Act of 1978 and the ensuing assistance of State and Private Forestry, USDA Forest Service.

In future analyses, more formal definitions will be needed to differentiate between planning programs. Only then will fair program comparisons be possible. One approach would be to distinguish more clearly between statewide strategic planning, program planning, work planning, and land management planning.

Data Quality and Interpretation

"Not sure" responses were considered valid and usable in this evaluation. Such returns came from respondents whose knowledge of statewide forest resource planning was too limited to complete the survey questionnaire, even though their interest in such planning was significant. "Not sure" responses reflect important planning information. However, their inclusion resulted in a considerable degree of uncertainty in all responses--about 20 percent. This represents a base level of uncertainty expected in all assessment elements.

Context of Statewide Forest Resource Planning

Most previous evaluations of strategic planning programs have failed to take context into account. Context elements describing the environment of statewide forest resource planning programs were specifically considered here. Also examined was whether individual context elements were related to measures of planning performance.

Character of Forest Resources

Elements describing the character of forest resources (e.g., total forest land, commercial forest land, state commercial forest land ownership, annual timber growth, value-added by forestry activities) revealed great variability in the contexts in which planning programs were undertaken.

A number of potential relationships were explored to discover particular elements that might explain the size of planning budgets. The fact that no significant relationships were found suggests that forest resource characteristics alone did not determine the size of planning programs.

Character of State Forestry Organizations

The character of state forestry organizations can have a significant impact on the success of statewide forest resource planning programs. Organizational characteristics (e.g., size, administrative structure, jurisdiction, existing relationships with other state and federal agencies) can either create barriers to planning or facilitate such efforts.

Total budgets for state forestry organizations across the nation showed great diversity, ranging between \$1 million and \$268 million in 1985. Median budgets increased by 66 percent between 1981 and 1985, representing substantial growth in support for forestry programs. This may be attributable, at least in part, to statewide forest resource planning programs. Such growth certainly reflects an increasing need for planning, so as to ensure the effective management of these organizations.

Previous Planning Culture

Prior experience with planning can make a considerable difference with respect to the success of a new planning program. Some state forestry organizations have relatively long and successful histories of planning while others have limited or unsuccessful planning experiences.

About 60 percent of all state forestry organizations were found to have documented goals and strategies which were used fairly regularly prior to initial statewide forest resource planning programs. Most of these goals and strategies, however, were contained in state law or agency policies, and represented only broad policy direction. Only 20 percent of the state forestry organizations had long-range plans which generally contain more specific goals and strategies.

Initial Planning Purposes

Although a fair evaluation should assess planning programs according to their own purposes, such purposes are difficult to identify. They are often vague and may be perceived differently by different respondents.

The most commonly recognized purpose of statewide forest resource planning programs was establishing long-term agency direction. This was followed by: increasing legislative and public understanding, justifying budget allocations to forestry programs, and fulfilling federal grant requirements. Planning programs were generally perceived to be quite effective in terms of fulfilling initial purposes.

Resources Available For Planning

Although the range of statewide forest resource planning budgets held reasonably steady between 1981 and 1985, the median planning budget dropped from \$16,000 to \$8,000. Both state and federal funding declined considerably during this period. Planning staff-sizes showed the same downward trend. Most of this decline can probably be attributed to the completion of first-generation plans--thus activities were reduced until the second generation. A few states did not reduce planning programs, displaying strong, continuous efforts.

More than two-thirds of all planners and state foresters perceived planning budgets as having been adequate. No relationship existed between the actual size of planning budgets and perceptions of budget adequacy. This suggests that perceptions of appropriate budget levels must take context elements and respondent expectations into account.

States with high planning budget levels (i.e., 15 states with more than \$45,000 budgets in 1981 and 4 states with more than \$60,000 in 1985) were more consistently associated with high performance measures than states with lower budget levels. This may suggest that higher budgets result in more effective programs. However, it might simply reflect the fact that in states where support for and interest in planning is high, both planning budgets and respondent perceptions of performance are also high.

Time Available for Planning

The amount of time required to complete first-generation plans ranged from one to nine years--the median was four years. More than 80 percent of all state forest resource planners and state foresters perceived the amount of time available to complete first-generation plans as having been adequate. This suggests that time, like money, was not a significant planning constraint.

No relationship existed between actual time-required and perceptions of time-adequacy. One year was perceived as adequate in one state, while nine years was considered inadequate in another state. Again, planning requirements appeared to be specific to the context, design, and objectives of each planning program.

Technical Complexity of Planning

State forest resource planners and state foresters perceived first-generation planning programs as having involved relatively little technical complexity. Only 18 percent of the planners and 30 percent of the state foresters considered planning programs to be complex. In conjunction with this, more than 80 percent of all planners and state foresters perceived the amount of technical skill on or available to planning staffs as having been adequate to meet planning objectives.

In both the planners and the state foresters groups, perceptions of high technical complexity were related to adequate technical skill, and perceptions of low technical complexity were related to inadequate skill. This suggests that statewide forest resource planning programs generally adopted a degree of technical complexity consistent with the amount of technical skill available.

Perceptions of high technical complexity were also found to be related to perceptions of high planning performance. This suggests that more sophisticated analytical methods and planning techniques may improve the perceived effectiveness of many future planning programs.

Political Support For Planning

State foresters and federal agencies were perceived to have given strong support to statewide forest resource planning at the outset. Governors, legislatures, state agencies other than state forestry organizations, forest industries, and other private interests were perceived to have given little political support. However, political support from all of the latter constituent groups was perceived to increase considerably upon completion of such planning programs. This suggests that statewide forest resource planning programs were quite successful in gaining the interest and backing of key constituents, even though many of them had little interest at the outset.

The support of most key constituent groups was perceived to have been relatively consistent across all regions at the outset of statewide forest resource planning programs. The exceptions were the forest industries and other private interests. At the outset of planning, these groups showed significantly lower support in the West than in the Northeast and Southeast. Their support also increased only minimally by the completion of the planning effort.

Several possible explanations exist for low support offered by these two groups. They may have been preoccupied with federal planning programs. Forest industries, in particular, might have perceived such planning as increasing the threat of further forest practice regulation. Or, the planning programs might not have provided sufficient opportunity for their involvement.

Another significant regional difference is that support by legislatures, other state agencies, and other private interests was perceived to increase significantly more from start to completion in the Northeast than in the Southeast or West. This suggests that the Northeast was more effective at building support among key constituents over the course of planning programs.

Significant differences existed between the perceptions of many state forest resource planners and state foresters with respect to the support given by legislatures and other state agencies. Planners generally perceived much lower support by these constituent groups at the outset of planning. Such differences in perception might result in confusion, and inappropriate planning strategies, unless planners and state foresters openly communicate.

Although political support at the outset of planning showed no relationship with performance measures, high levels of political support at the completion of planning were strongly related to high performance measures. This suggests that the support of key constituent groups is important to effective planning.

Process of Statewide Forest Resource Planning

Previous evaluations of strategic planning programs have generally failed to adequately describe or assess planning processes. Identified in this evaluation are the major process-types employed in statewide forest resource planning across the country. These processes are characterized by assessing the degree to which they addressed significant process elements.

Types of Planning Processes

First-generation planning programs generally adopted one of three process types: issue-driven, goal-oriented, or interactive planning. The issue-driven process consists of a rational, comprehensive list of planning activities, patterned after the federal Forest and Range Renewable Resources Planning Act of 1972 (i.e., RPA) process. Over half of the states adopted this type of process for their initial plan.

The goal-oriented process focuses more on future goals than on current issues. Seven states used this process type.

The interactive process is a highly-structured group process that utilizes consensus-building group techniques to develop goals, objectives, and strategies. It was gaining popularity as first-generation plans were being completed, but only three states actually claimed to have used it for their initial plan.

A number of states used combinations of process-types, the most common being an issue-driven/goal-oriented (i.e., issue/goal) process. This evaluation discovered that the combined issue/goal process was related to consistently high perceptions of planning effectiveness, across virtually all assessment elements. Furthermore, this process-type was related to significantly higher perceptions of effectiveness with respect to the following assessment elements:

- o Internal Assessments
- o Implementation, Monitoring, and Evaluation
- o Decision-Making Processes
- o Process Satisfaction
- o Satisfaction with Goals, Objectives, and Strategies

The apparent success of the issue/goal process warrants further research.

The interactive planning process was related to perceptions of greater uncertainty with respect to most assessment elements. Because the process involves highly-structured group techniques, respondents may not be sure about the extent to which particular process elements have been addressed.

Process Elements

Thirteen process elements were assessed in order to explore the comprehensiveness and the emphasis of statewide forest resource planning programs. These elements are:

- o Mission Definition
- o Internal Assessment
- o External Assessment
- o Forest Resource Assessment
- o Issue Identification
- o Goal Development
- o Public Involvement
- o Multiple Resource Assessment
- o Ownership Contribution Assessment
- o Alternative Strategy Development
- o Strategy Evaluation and Selection
- o Planning/Budgeting Link
- o Implementation, Monitoring, and Evaluation

National Perceptions

Many respondents (from 25 to 50 percent, varying with each individual element) were uncertain whether process elements had been effectively addressed through statewide forest resource planning programs. This represents a substantial lack of awareness about such planning programs, especially among certain respondent groups (e.g., state budget directors, legislators, and environmental group representatives).

Among respondents with sufficient knowledge to express an opinion, a great majority agreed that most process elements had been effectively addressed. This implies that most statewide forest resource planning programs across the country were perceived to have been fairly comprehensive and relatively effective. Goal development and mission definition were perceived as the most effectively addressed process elements, while planning and budgeting link, and external assessment were seen as being addressed least effectively.

A number of states confronted institutional barriers in attempting to link planning and budgeting processes. With regard to external assessments, respondents cited a lack of appropriate data and information, a lack of practical analytical techniques, and institutional reluctance to conduct such assessments as the major problems.

Regional Perceptions

A much higher percentage of respondents in the Northeast (from 15 to 20 percent more, varying with each individual element) than in the Southeast or West perceived issue identification, public involvement, multiple resource assessment, and contribution of various ownerships as having been effectively addressed. Such perceptions of greater effectiveness could be

attributed to Northeastern states use of predominantly issue-driven processes, which are generally more comprehensive.

Another significant difference is the relatively low perception of effectiveness in the West with respect to strategy evaluation and selection. One possible explanation is that greater use of goal-oriented planning and stronger emphasis on internal agency planning in the West resulted in a more direct approach to selecting final strategies, one that did not involve a formal evaluation of alternative strategies. Future programs in the West may find it worthwhile to give greater attention to this process element in order to avoid stakeholder dissatisfaction.

Respondent Group Perceptions

A number of significant differences have been noted among the perceptions of different respondent, or stakeholder, groups. Planners and state foresters should be cognizant of these varying perceptions since they may be important to the design of future planning programs.

State forest resource planners and state foresters perceived greater effectiveness than other groups with respect to several process elements (i.e., mission definition, issue identification, multiple resource assessment, and alternative strategy development). This may reflect greater familiarity with planning processes. It also suggests that other groups could be better informed.

The perceptions of planners differed significantly from those of state foresters with respect to a number of process elements (i.e., internal assessment, external assessment, public involvement, and strategy selection). Such differences may represent a lack of clear understanding between staff-level and management-level positions. Planners and state foresters may need to improve their own communication in order to minimize problems arising from such differences.

Other differences were more general in nature. For example, state budget directors usually expressed much greater uncertainty than other groups. This is not surprising since they probably have much less exposure to forestry issues and programs than other respondents. Administrative officials of natural resource organizations, state budget directors, and legislators seldom perceived planning programs as being ineffective. They tended either to agree that programs had been effective, or to be uncertain. This probably reflects the fact that their primary sources of information were state foresters and other officials within state forestry organizations.

Finally, environmental group representatives revealed the most critical perceptions of planning programs, probably reflecting their specific interests in planning.

Improving the Effectiveness of Planning Processes

Eight recommendations below summarize the responses of state forest resource planners to an open-ended question on how to improve the effectiveness of planning processes:

- o Use a goal-oriented process rather than an issue-driven process in order to be proactive rather than reactive.
- o Broaden involvement during statewide forest resource planning to include all relevant interests outside the state forestry organization, and increase involvement of field people within state forestry organizations.

- o Seek support from policy-makers in the state (e.g., Governor, legislators, officials in federal, state, and local agencies) at the outset of planning. The creation of an advisory board, consisting of leadership representatives, may be useful to establish direction and oversee the planning effort.
- o Develop a comprehensive, statewide forest resource plan first, providing general assessment information and direction. Then prepare more detailed programs plans, and sub-state plans directly linked to the comprehensive plan.
- o Employ at least one full-time planner working under the guidance, and with the support, of the State Forester.
- o Encourage processes and procedures that maintain enthusiasm and momentum.

Outputs of Statewide Forest Resource Planning

The third assessment component consisted of key outputs of statewide forest resource planning programs. Outputs were identified as an array of planning benefits that might be expected to accrue to state forestry organizations and state forestry communities.

Planning Benefits

The degree to which nine potential planning benefits have been realized as a result of statewide forest resource planning programs was assessed. Potential planning benefits include:

- o Long-Term Direction
- o Decision-Making Processes
- o Program Compatibility
- o Anticipation and Response
- o Authority, Accountability and Control
- o Public Awareness
- o Policy-Maker Awareness
- o Political Support
- o Communication/Coordination

National Perceptions

A relatively high percentage of the respondents expressed uncertainty about planning benefits (from 30 to 50 percent, varying with each individual element). In fact, uncertainty was even higher with respect to planning benefits than to process elements. This may be explained partly by respondent difficulty in perceiving certain ill-defined benefits (e.g., increased public awareness of forestry issues; a clearer sense of long-term direction); partly by an inability to perceive whether benefits were attributable to planning; and partly by the fact that several benefits (e.g., improved decision-making processes; program compatibility; anticipation and response) were to accrue to state forestry organizations and, thus, might have been difficult for respondents outside of the organization to perceive.

Among respondents able to express opinions about planning benefits, a much higher percentage agreed that most benefits have been realized. This is strong evidence that respondents perceived a number of returns for investments in statewide forest resource planning programs. Improvements in long-term direction, and communication and coordination were the two most commonly perceived benefits.

Increased political support, and improved authority, accountability, and control were the two least recognized planning benefits. With respect to political support, this can be explained partly by confusion over a question that inquired about increases in both political support and forestry program budgets. High uncertainty about management control systems within state forestry organizations may account for relatively low recognition of the latter benefit.

Regional Perceptions

Perceptions varied significantly between regions with respect to increased public awareness and improved communication and coordination. Only 29 percent of the respondents in the West perceived increased public awareness as a planning benefit. This compared to 46 percent in the Southeast and 57 percent in the Northeast. This may reflect the higher frequency of agency-oriented planning programs in the West.

A much higher percentage of respondents in the Northeast (65 percent) perceived improved communication and coordination than respondents in the Southeast (46 percent) or in the West (44 percent). This can probably be explained by the prevalent use of the issue-driven process in the Northeast, which focused heavily on broad public involvement.

Respondent Group Perceptions

Differences in respondent group perceptions were less distinct with respect to planning benefits than to process elements. One general observation is that state budget directors usually expressed much higher uncertainty than other respondent groups. Other differences were more isolated. For example, legislators showed a much higher ratio of agreement to disagreement than other groups with respect to authority, accountability, and control within state forestry organizations. This may be due to a propensity on the part of legislators to respond favorably even when they have little information about such internal management systems.

Forest industry representatives showed a higher ratio of disagreement to agreement than other groups with respect to decision-making processes, and anticipation and response. These differences suggest that forest industry representatives were more concerned about administrative procedures of state forestry organizations.

Finally, environmental group representatives showed a much higher ratio of disagreement to agreement than other groups with respect to increased political support for forestry programs. This reflects a more critical view of the effectiveness of statewide forest resource planning programs in reaching legislators and other policy-makers.

Positive Planning Effects

Sixty-nine percent of all respondents cited positive planning effects in response to an open-ended question. The most frequently cited positive effects correlated closely with the most commonly recognized planning benefits. A number of other positive effects were identified:

- o Improved communication and coordination among public and private forestry organizations, resulting in greater mutual understanding and community cohesiveness.
- o A means for raising the interest and understanding of legislators, other policy-makers, and the general public with respect to forestry issues, thus increasing political support for forestry programs.
- o A clearer sense of long-term direction in the state forestry organization through better definition of mission, roles, responsibilities, goals, objectives, and priorities for action.
- o A comprehensive forest resource data base and related information for improved analysis and better understanding of resource needs and opportunities.
- o Improved management systems within state forestry organizations through changes in administrative patterns, decision-making processes, program planning, work planning, and accomplishment reporting.
- o Broadened perceptions and changed attitudes by encouraging people to recognize a range of values and perspectives, and to think strategically about problems and opportunities over the long term.
- o Served as a catalyst for major forestry development actions in the state, in both the public and private sectors.

Respondents gave numerous examples of benefits accruing to individual states. One benefit they failed to mention, however, was increased cooperation between states. Two regional forest planning groups, involving state and federal forestry officials, have originated largely as a result of statewide forest resource planning activities (i.e., the Upper Great Lakes Forest Planning Committee, and the Northeast Forest Alliance). Such regional cooperation was an unanticipated benefit demonstrating what can occur through the expanded scope and innovative thinking encouraged by statewide forest resource planning.

Negative Planning Effects

An open-ended question on the negative effects of statewide forest resource planning programs received a response from 63 percent of all respondents. Only 38 percent of all respondents cited negative effects; 25 percent indicated no negative effects attributable to planning. Several of the more commonly cited negative effects are:

- o The costs of planning programs were significant in terms of dollars and staff time, resulting in some resentment from other programs.
- o Poorly executed planning programs resulted in a loss of respect for the state forestry organization.
- o Political and economic forces beyond the control of the state forestry organization have wrought havoc with the organization's structure or budget, frustrating the achievement of planning objectives and diminishing the perceived usefulness of the planning program.
- o Sensitive issues were raised during the planning process, leading to problems for the state forestry organization and greater conflict between certain interest groups.

- o Planning raised great expectations that have not been and probably cannot be fulfilled.

Performance of Statewide Forest Resource Planning

The final assessment component focused on the performance of statewide forest resource planning programs. Involved were general perceptions of planning programs as opposed to the more specific criteria identified in the process and output components. Respondents were encouraged to explain or qualify their perceptions in conjunction with structured responses.

Performance Measures

Six performance measures that reflect how well planning programs have been carried out with respect to the expectations of various stakeholders were identified and assessed. They are:

- o Importance of Planning
- o Purpose Fulfillment
- o Process Satisfaction
- o Satisfaction with Goals, Objectives, and Strategies
- o Adoption and Use
- o Progress Toward Implementation

National Perceptions

Since questions about performance measures required only a general awareness of statewide forest resource planning, uncertain responses reflect very low levels of knowledge. Such responses may be partly due to respondent disinterest. They also reveal an opportunity for planning programs to reach a far greater number of stakeholders with planning information.

A vast majority of the respondents (75 percent) perceived statewide forest resource planning programs as being important to the interests of forestry in their states. This represents a strong endorsement among stakeholders of the need to continue such planning programs, despite the difficulties encountered in many first-generation programs. In addition, 30 percent of all respondents indicated their perceptions of planning's importance had changed since the outset, two-thirds of whom now believed that planning was more important. Respondents also perceived high performance with respect to purpose fulfillment, process satisfaction, and satisfaction with goals, objectives, and strategies.

Performance was perceived to be lower with respect to adoption and use, and progress toward implementation. This can be partly explained by the fact that many planning programs have only recently been completed. It is also due, however, to inherent difficulties in gaining acceptance and effecting implementation.

Regional Perceptions

No significant regional differences were found among perceptions of performance measures. This suggests that perceptions of such broad measures may be less distinctive.

Respondent Group Perceptions

Several significant differences were discovered between respondent group perceptions of performance measures:

- o State forest resource planners and state foresters expressed significantly higher satisfaction than other respondent groups with respect to planning processes.
- o State foresters used statewide forest resource plans more frequently than other groups (i.e., excluding state forest resource planners). This might be expected since state foresters are a primary stakeholder of such planning programs.
- o Environmental group representatives perceived lower planning performance with respect to purpose fulfillment, and progress toward implementation. This may be because the expectations and interests of such respondents are more specific.
- o State budget directors revealed much higher uncertainty than other respondent groups, even though performance measures require only a basic awareness of statewide forest resource planning programs.

Planning Accomplishments

In conjunction with structured responses to progress toward implementation, respondents cited a vast array of accomplishments they perceived to be attributable to statewide forest resource planning programs. Such accomplishments, for the most part, were very specific or programmatic, although some were broad or policy-oriented. Many of these accomplishments had been identified through monitoring systems within state forestry organization (i.e., annual or quarterly reporting systems).

Several states also conducted surveys of all forestry organizations to determine whether actions recommended in statewide forest resource plans were being pursued and objectives being achieved.

Effectiveness Profiles of State Planning Programs

Information gathered by this research effort was generally discussed in terms of the nation, broad regions, or respondent groups. State data was aggregated to larger geographic areas because of the small samples from some states and the impracticality of discussing 48 individual programs. However, a considerable amount of information was obscured by aggregating state data. The direct approach to evaluating statewide forest resource planning programs could provide a great deal of useful information if applied more comprehensively at the state level.

A profile of Minnesota's statewide forest resource planning program, utilizing data from the seven respondents and the various assessment elements, is presented in Appendix J-1. Even this type of relatively limited profile can provide valuable information for state forest resource planners and state foresters. However, if such a profile were to include a greater number of assessment elements based on criteria specific to a particular program (i.e., internal criteria), and a greater number of respondents (especially program managers and field people in a state forestry organization), it could provide much more useful information for the design and administration of future planning programs. State forest resource planners and state foresters might find the direct approach to evaluating statewide forest resource planning programs a practical tool for assessing their own programs.

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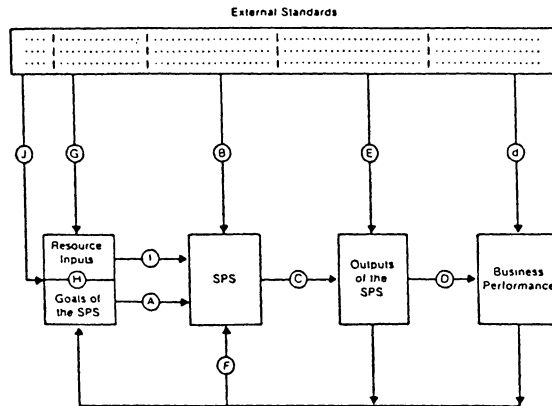
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APPENDIX A

The Direct Approach to Strategic Planning Evaluation

Figure 1. Expanded Model of SPS Direct Evaluation Process



(King, 1983)

King's framework for direct evaluation of a strategic planning system (SPS) has five major components and ten elements which designate specific assessment points (Figure 1). The major components include:

Inputs to the SPS comprised of both resource inputs and goals of the SPS;

SPS itself, defined as the complete set of processes and entities through which an organization does its planning;

Outputs of the SPS represented by the content of the planning documents;

Business performance as indicated by selected performance criteria; and,

External standards reflecting the set of common planning standards which may be appropriately applied to each of the major components of the evaluation process.

The assessment elements, designated by circled letters in Figure 1, are listed below:

- (A) the effectiveness of planning
- (B) the relative worth of the SPS
- (C) the role and impact of the SPS
- (D) the performance of plans
- (E) the relative worth of strategy
- (F) the adaptive value of the SPS
- (G) the relative efficiency
- (H) the adequacy of resources
- (I) the allocation of planning resources
- (J) the appropriateness of planning goals.

Research techniques have been developed and applied for several of these assessment elements, although multiple assessments have never been arrayed to present a comprehensive picture of planning effectiveness.

APPENDIX B

Nationwide Mail Survey and Cover Letters

State Forest Resource Planning:

How Effective Has It Been In Your State?



This survey is being done to assess the diverse experiences of the forty-eight states that have undertaken comprehensive state forest resource planning programs over the past seven years. How effective have these programs been? What benefits have they provided to the states? How might these planning programs be improved?

Sponsors of the study are the Department of Forest Resources, University of Minnesota, and State and Private Forestry, USDA Forest Service. The National Association of State Foresters and the Northeastern Forest Resource Planners Association have also stated their support for the study.

The study's success relies on personal responses from selected officials and individuals in each state. Please answer all of the questions. If you wish to comment on any questions or qualify your answers, please use the spaces provided, margins or a separate sheet of paper.

Thank you very much for your cooperation. Please return this questionnaire by March 14, 1986 to:

Gerald J. Gray
College of Forestry
University of Minnesota
110 Green Hall
1530 North Cleveland Avenue
St. Paul, MN 55108
(612) 376-8355

QUESTIONNAIRE FOR STATE FOREST RESOURCES PLANNERS

Q-1. How important or unimportant is State Forest Resource Planning to the interests of forestry in your state? (Please circle one)

1. VERY IMPORTANT
2. SOMEWHAT IMPORTANT
3. NOT SURE
4. SOMEWHAT UNIMPORTANT
5. VERY UNIMPORTANT

If you believe that State Forest Resource Planning is very unimportant, you may wish not to respond to this questionnaire. Should this be the case, please return the questionnaire in the stamped, self-addressed envelope. Thank you. We would, however, appreciate any comments that you might wish to make regarding State Forest Resource Planning.

Q-2. Has your perception of the importance of State Forest Resource Planning changed since the outset of such planning? (Please circle one)

1. NO
2. YES

↳ If yes, please explain how your perception has changed.

Q-3. In what year was the initial State Forest Resource Planning program formally begun in your state?

YEAR _____

Q-4. In what year was the initial State Forest Resource Plan completed in your state? (Alternatively, when is it expected to be completed?)

YEAR _____

Q-5. What were the initial purposes for undertaking State Forest Resource Planning in your state? (Please circle one or more)

1. To justify budget allocations to forestry programs.
2. To increase legislative and public understanding.
3. To fulfill federal grant requirements.
4. To establish long-term agency direction.
5. Other (Please specify)

Q-6. To what degree has State Forest Resource Planning been effective or ineffective in fulfilling its initial purposes? (Please circle one)

1. VERY EFFECTIVE
2. SOMEWHAT EFFECTIVE
3. NOT SURE
4. SOMEWHAT INEFFECTIVE
5. VERY INEFFECTIVE

Planning Benefits

Proponents of State Forest Resource Planning maintain that certain benefits will be realized through planning. Please indicate the degree to which you feel that the benefits listed below have been realized by your state forestry organization as a result of State Forest Resource Planning.

(Please circle the degree to which you agree with each of the following statements)

COMMENTS

Q-7. There is a clearer sense of long-term direction in the organization.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-8. More efficient decision-making processes have been established in the organization.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-9. There is an increased sense of program compatibility in the organization.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-10. The organization's ability to anticipate and respond to forestry opportunities and problems has been improved.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

COMMENTS

- Q-11. An improved system of authority, accountability and control has been established in the organization.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-12. More effective means have been provided for raising the consciousness of the general public with respect to forestry issues.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-13. More effective means have been provided for raising the consciousness of policy-makers (i.e. governor, legislators) with respect to forestry issues.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-14. Political support for forestry programs has grown, resulting in increasing budgets for the organization.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-15. Communication and coordination between the state forestry organization and other state, federal, and local natural resource organizations has been improved.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE

5

Q-16. What, if any, are the two most significant positive effects that you believe State Forest Resource Planning has had on forestry in your state? (Please list and briefly explain)

Q-17. What, if any, are the two most significant negative effects that you believe State Forest Resource Planning has had on forestry in your state? (Please list and briefly explain)

Process

During the first generation of State Forest Resource Planning, "process" was heavily emphasized. The following questions address the types of processes that were used, how effective they have been in different state settings, and how they might be improved upon.

COMMENTS

Q-18. What type of process did your state forestry organization use for State Forest Resource Planning? (Please circle one)

1. ISSUE DRIVEN
2. GOAL ORIENTED
3. INTERACTIVE PLANNING (PATHWAYS)
4. OTHER (Please specify)

Q-19. To what degree were you satisfied or dissatisfied with the State Forest Resource Planning process in your state? (Please circle one)

1. VERY SATISFIED
2. SATISFIED
3. NOT SURE
4. DISSATISFIED
5. VERY DISSATISFIED

Q-20. How would you change your state's process to improve the effectiveness of State Forest Resource Planning? (Please discuss briefly)

7

The following statements reflect activities that might be included in a State Forest Resource Planning process. Please indicate the degree to which you feel that each of the activities listed below was effectively carried out during State Forest Resource Planning in your state.

(Please circle the degree to which you agree with each of the following statements.)

COMMENTS

Q-21. The mission of your state forestry organization was clearly defined.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-22. Potential impacts of social, demographic, economic and technological trends on forestry were adequately assessed.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-23. The state's forest resources were adequately assessed (i.e. in terms of supply and demand).

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-24. The roles, responsibilities, and organizational structure of the state forestry organization were assessed.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

- Q-25. All of the important forestry issues in your state were identified.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-26. Goals were developed for forestry programs and activities in your state.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-27. Other State and Federal agencies, private groups and individuals with interests in forestry were adequately and appropriately involved in the planning process.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-28. The use and management of multiple forest resources (e.g. timber, wildlife, recreation) were adequately addressed in the planning process.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE
- Q-29. State, Federal and private forest-land ownerships were given adequate consideration during each phase of the planning process.
1. STRONGLY AGREE
 2. AGREE
 3. NOT SURE
 4. DISAGREE
 5. STRONGLY DISAGREE

9

(Please circle the degree to which you agree with each of the following statements.)

COMMENTS

Q-30. An appropriate set of alternative strategies was developed to address issues and/or to achieve goals.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-31. A collection of strategies (i.e. Recommended Program) was selected based upon a fair evaluation of the alternative strategies.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-32. A clear linkage was established between the selected strategies and the agency's budgetary process (e.g. funding priorities were set).

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-33. Implementation, monitoring and evaluation strategies were developed during the planning process.

1. STRONGLY AGREE
2. AGREE
3. NOT SURE
4. DISAGREE
5. STRONGLY DISAGREE

Q-34. To what degree are you satisfied or dissatisfied with the goals, objectives and strategies recommended in the State Forest Resource Plan? (Please circle one)

1. VERY SATISFIED
2. SATISFIED
3. NOT SURE
4. DISSATISFIED
5. VERY DISSATISFIED

Please explain why you are satisfied or dissatisfied.

Adoption and Use

The following questions address the degree to which the State Forest Resource Plan is actually being used by decision-makers (i.e. program managers, administrators) in your state.

Q-35. To the best of your knowledge, how often do program managers and administrators in your state forestry organization use the State Forest Resource Plan when making strategic decisions? (Please circle one)

1. OFTEN
2. SOMETIMES
3. SELDOM
4. NEVER
5. NOT SURE

Please cite any specific examples of which you know.

Q-36. To the best of your knowledge, how often do decision-makers in other State, Federal and private organizations within the state use the State Forest Resource Plan when making strategic decisions related to forestry? (Please circle one)

1. OFTEN
2. SOMETIMES
3. SELDOM
4. NEVER
5. NOT SURE

Please cite any specific examples of which you know.

Implementation

The implementation of a plan is one of the most important measures of effectiveness. The following questions address implementation by inquiring whether goals and objectives specified in your State Forest Resource Plan are being achieved.

Q-37. To what degree has progress been made in your state toward achieving the goals and objectives specified in your State Forest Resource Plan? (Please circle one)

1. A GREAT DEGREE
2. SOME DEGREE
3. A LITTLE
4. NONE AT ALL
5. NOT SURE

Please cite any specific examples of achieved goals or objectives of which you are aware.

Q-38. How is your state forestry organization attempting to measure whether goals and objectives specified in the State Forest Resource Plan are being achieved?
(Please explain briefly)

Planning Context

The economic, technological, political and administrative setting in which State Forest Resource Planning is undertaken (i.e. planning context) may have considerable effect upon planning effectiveness. The following questions address the degree to which planning context either contributed to or constrained the State Forest Resource Planning effort in your state.

Q-39. Prior to the initiation of comprehensive State Forest Resource Planning in your state, were there any documented long-range goals and strategies to guide the state forestry organization? (Please circle one)

1. NO
2. YES

→ Q-40. Where were such goals and strategies documented? (Please circle one or more)

1. STATE LAW
2. STATE AGENCY REGULATIONS
3. STATE AGENCY POLICY STATEMENTS
4. LONG-RANGE FORESTRY PLAN
5. OTHER (Please specify)

→ Q-41. To what degree were such strategies actually used by decision-makers (i.e. program managers, administrators) when making strategic decisions? (Please circle one)

1. OFTEN
2. SOMETIMES
3. SELDOM
4. NEVER
5. NOT SURE

Q-42. How adequate was the amount of time available to complete the State Forest Resource Planning program in your state? (Please circle one)

1. VERY ADEQUATE
2. ADEQUATE
3. INADEQUATE
4. VERY INADEQUATE
5. NOT SURE

Q-43. What was the size of the professional staff working on your State Forest Resource Planning program during the years given below? (Please indicate in terms of full-time equivalents)

YEAR	FULL-TIME EQUIVALENTS
1985	_____
1983	_____
1981	_____
1979	_____

Q-44. Approximately what percentage of their time did your planning staff spend on the production and maintenance of your State Forest Resource Plan (i.e. activities directly related to planning), as opposed to other activities (e.g. special projects for the State Forester and other forestry program managers) during preparation of the initial plan and after completion of the initial plan?

	<u>DIRECT PLANNING ACTIVITIES</u>	<u>OTHER ACTIVITIES</u>
<u>DURING PREPARATION</u>	_____ PERCENT	_____ PERCENT
<u>AFTER COMPLETION</u>	_____ PERCENT	_____ PERCENT

15

Q-45. How would you characterize your organization's State Forest Resource Planning effort in terms of technical complexity (e.g. the complexity of data analysis, information management, strategy development)? (Please circle one)

- 1. VERY COMPLEX
- 2. COMPLEX
- 3. SOME COMPLEXITY
- 4. LITTLE COMPLEXITY
- 5. NOT SURE

Q-46. How adequate was the amount of technical skill on or available to your planning staff during the State Forest Resource Planning effort? (Please circle one)

- 1. VERY ADEQUATE
- 2. ADEQUATE
- 3. INADEQUATE
- 4. VERY INADEQUATE
- 5. NOT SURE

Q-47. What were the budget levels for the entire state forestry organization during the years given below?

TO THE NEAREST \$100,000

<u>YEAR</u>	<u>TOTAL BUDGET</u>	<u>YEAR</u>	<u>TOTAL BUDGET</u>
1985	_____	1977	_____
1983	_____	1975	_____
1981	_____	1973	_____
1979	_____	1971	_____

- Q-48. What were budget levels and sources of funding for State Forest Resource Planning during the years given below? (Budget levels should include salaries and expenses directly related to the production and maintenance of the State Forest Resource Plan. Amount of funds by source should distinguish between Federal assistance, State appropriations, and any other special funding sources.)

TO THE NEAREST \$5000

<u>YEAR</u>	<u>BUDGET LEVEL</u>	<u>FUNDS BY SOURCE</u>
1985	_____	Federal _____ State _____ Other _____
1983	_____	Federal _____ State _____ Other _____
1981	_____	Federal _____ State _____ Other _____
1979	_____	Federal _____ State _____ Other _____

- Q-49. How adequate were planning budget levels to meet the objectives of the State Forest Resource Planning program in your state? (Please circle one)

1. VERY ADEQUATE
2. ADEQUATE
3. INADEQUATE
4. VERY INADEQUATE
5. NOT SURE

17

Political support, from outside and within state forestry organizations, may be one of the most important elements for effective planning. How much political support did each of the following groups or individuals show for State Forest Resource Planning at the start and completion of the planning effort?

(Please circle one response for the amount of support AT THE START and one response for the amount of support AT COMPLETION)

	<u>AT THE START</u>	<u>AT COMPLETION</u>
Q-50. Governor	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE
Q-51. State Legislature	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE
Q-52. State Forester	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE
Q-53. Other State Agencies	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE

	<u>AT THE START</u>	<u>AT COMPLETION</u>
Q-54. Federal Agencies	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE
Q-55. Forest Industries	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE
Q-56. Other Private Interests	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE	1. HIGH 2. MODERATE 3. LOW 4. NONE 5. NOT SURE

If someone other than the addressed respondent completes this questionnaire, please print your name and position title below. Thank you.

NAME _____

POSITION _____

Is there anything else that you would like to mention about State Forest Resource Planning? If so, please use this space for that purpose.

YOUR CONTRIBUTION TO THIS EFFORT IS VERY GREATLY APPRECIATED. IF YOU WOULD LIKE A SUMMARY OF THE RESULTS, PLEASE PRINT YOUR NAME AND ADDRESS ON THE BACK OF THE RETURN ENVELOPE (NOT ON THIS QUESTIONNAIRE).

Cover Letter 1: February 21, 1986

Mr. James A. Stearns
Supervisor
Dept. of Natural Resources
202 Public Land Bldg.
Mail Stop QW-21
Olympia, WA 98504

Dear Mr. Stearns:

Over the past seven years, forty-eight states have undertaken comprehensive forest resource planning programs. Expenditures by the U.S. Forest Service and the States on such programs have been more than \$2 million annually. Now that the majority of the "first generation" State Forest Resource Plans have been completed, officials across the nation are beginning to ask, "How effective were these planning programs? What benefits did they provide to our state? What might be done to improve the second generation of planning?"

This survey is part of a research effort that will attempt to respond to these questions by assessing the diverse forest planning experiences of state governments nationwide. The research effort is sponsored by the Department of Forest Resources, University of Minnesota, and State and Private Forestry, USDA Forest Service. The National Association of State Foresters and the Northeastern Forest Resource Planners Association have also expressed their support for the effort.

The evaluation relies upon the perceptions of selected officials and individuals in each state. Your personal response is of great importance to the study. Please do not pass the questionnaire on to your State Forest Resource Planner. Thank you very much for your assistance.

Research results will be available on completion of the study. If you would like a summary of the results, please write "Request Results" on the back of the return envelope and print your name and address below it.

Once again, thanks for your cooperation. Please return the questionnaire by March 14, 1986. If you should have any questions or comments about the study, feel free to write or call me.

Sincerely,

Gerald J. Gray
Research Assistant
(612) 376-8355


Follow-up Postcard

March 7, 1986

Two weeks ago, a questionnaire seeking your perceptions of comprehensive state forest resource planning was mailed to you. If you have already completed and returned it to us, please accept our sincere thanks. If not, would you please do so as soon as possible. Because you are one of only seven officials or individuals selected from your state for the nationwide study, your response is extremely important to accurately represent your state.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me or drop me a note. I will get another one in the mail to you immediately.

Yours truly,



Gerald D. Gray
Research Assistant
(612) 376-8355

Cover Letter 2

April 4, 1986

Ms. Elizabeth H. Spence
Executive Director
South Carolina Wildlife Fed.
Box 4186
4949 Two Notch Rd., #B-1
Columbia, SC 29204

Dear Ms. Spence:

About six weeks ago, a questionnaire seeking your perceptions of comprehensive state forest resource planning was mailed to you. As of today, we have not yet received your response. I am writing to you again because of the significance of each questionnaire to the usefulness of the study. You are one of only seven officials or individuals in your state selected for the nationwide survey. Therefore, your response is of great importance, if your state is to be accurately represented in the results.

This study has been undertaken to help officials across the nation assess the diverse forest planning experiences of state governments. Its basic objectives are to determine how effective such planning programs have been, what benefits they have provided, and how future programs might be improved upon. The research effort is sponsored by the Department of Forest Resources, University of Minnesota, and State and Private Forestry, USDA Forest Service. The National Association of State Foresters and the Northeastern Forest Resource Planners Association have also expressed their support for the effort.

Research results will be available on completion of the study. If you would like a summary of the results, please write "Request Results" on the back of the return envelope and print your name and address below it.

Thank you very much for your cooperation. In the event that your original questionnaire has been misplaced, another copy is enclosed. Please feel free to write or call me if you should have any questions or comments about the study.

Sincerely,

Gerald J. Gray
Research Assistant
(612) 376-8355

APPENDIX C

Case Study Selections Criteria and List of Interviews

11-10-85

Case Study Selection Criteria

Case study states will be chosen on the basis of several selection criteria:

- o regional representation
- o significant forest resources
- o ownership pattern of forest resources
- o size of forest planning staff and budget
- o planning processes or techniques used
- o degree of success achieved
- o date of plan completion
- o continuity of experience with planning effort
- o willingness to participate in study

The ultimate objective of the case studies is to learn as much as possible from first-generation planning efforts. Therefore, diversity should be an important criterion. In the process of learning, however, we also want to identify strategic actions that were successful; thus, states with planning programs that are perceived as successful may be favored.

Case Study List of InterviewsCalifornia

Mr. Robert Ewing, Supervisor
Forest and Range Resource Assessment Program
California Department of Forestry

Ms. Nancy Tosta
Forest Planner
Forest and Range Resource Assessment Program
California Department of Forestry

Mr. Dean Cromwell
Executive Officer
California State Board of Forestry

Mr. Ken Delfino
Deputy Director
Resource Management
California Department of Forestry

Mr. Harold Waraas
Assistant Secretary for Public Information
Resources Agency

Mr. Dean Lucke
Forest Improvement Program
California Department of Forestry

Mr. Fred Landenberger
Assistant Manager
California Forest Protective Association

Ms. Bea Cooley
Friends of the River

Minnesota

Mr. Dave Zumeta, Supervisor
State Forest Planning Section
Division of Forestry
Minnesota Department of Natural Resources

Ms. Jane Harper
State Forest Planning Section
Division of Forestry
Minnesota Department of Natural Resources

Mr. Jim Brooks
Assistant Director
Division of Forestry
Minnesota Department of Natural Resources

Mr. Steve Thorne
Assistant Commissioner
Minnesota Department of Natural Resources

Mr. Bob Buckler
Executive Director (former)
Minnesota Forest Industries

Mississippi

Mr. Oscar Tissue
Forest Planner
Mississippi Forestry Commission

Mr. Michael Sims
Forest Planner/Analyst
Mississippi Forestry Commission

Mr. Robert S. Moss
State Forester
Mississippi Forestry Commission

Mr. Robert Izlar
Executive Vice President
Mississippi Forestry Association, Inc.

Mr. James Bright
Forest Protection, Chief
Mississippi Forestry Commission

Mr. J.W. Colvin
Information and Education, Chief
Mississippi Forestry Commission

Mr. Freddie Jordan
Forest Management, Chief
Mississippi Forestry Commission

New Hampshire

Ms. Gail Vaillancourt
Forest Resources Planner
Division of Forests and Lands
Department of Resources and Economic Development

Mr. J.B. Cullen
Forest Information and Planning, Chief
Division of Forests and Lands
Department of Resources and Economic Development

Mr. Jack Sargent
State Forester
Division of Forests and Lands
Department of Resources and Economic Development

Mr. Theodore Natti
State Forester (former)
Division of Forests and Lands
Department of Resources and Economic Development

Mr. Paul Bofinger
President/Forester
Society for the Protection of New Hampshire Forests

Oregon

Mr. Dave Stere
Forest Resource Planning Leader
Oregon Department of Forestry

Mr. Bob Bourhill
Forest Resource Planning
Oregon Department of Forestry

Mr. Bill Voelker
Forest Management Leader
Oregon Department of Forestry

Mr. Jim Brown
Associate State Forester
Oregon Department of Forestry

Mr. John Ball
Chairman
Oregon State Board of Forestry

APPENDIX D

Nationwide Mail Survey Response

Table D-1. Results of Nationwide Survey: Response by State, Region and Respondent Type (1)

State	Respondent Type							Regional Response	Response Rate (%)
	Forest Planner	State Forester	Admin. Offic'l	Budget Director	Legislator	Forest Industry	Environmental		
NORTHEAST									
Connecticut		nu	x	ns	ns		x	4	57
Delaware	x	x	x	x				4	57
Illinois	x	x	ns	x	x	x		6	86
Indiana	x	x	x		x	x	nu	5	71
Iowa	x	x(d)	x	ns			x	5	71
Maine	x		x	nu	x	x	x	5	71
Maryland	x	x		ns		---		3	50
Massachusetts	x			nu	ns	x		3	43
Michigan	x	x	x	x		x	x	6	86
Minnesota	x	x	x	ns	x	x	x	7	100
Missouri	x		ns		x			3	43
New Hampshire	x	x	nu	x	x		x	5	71
New Jersey	x	x	x	x	nu		x	5	71
New York	x	x	ns	x			x	5	71
Ohio	x	x		x	x	ns	x	6	86
Pennsylvania	x	x		ns		x	x	5	71
Rhode Island	x	x	ns	nu		ns	x	5	71
Vermont	x		x				x	3	43
Wisconsin	x	x	---			x	nu	3	50
Regional Response	18	14	13	12	9	10	12	88	67
Regional Response Rate (%)	95	74	73	63	47	56	63	67	
SOUTHEAST									
Alabama	x	x	---		nu	x		3	50
Arkansas	x	x		ns	x	x	nu	6	86
Florida	x		nu			ns		2	29
Georgia	x	nu	---	x		ns	ns	4	67
Kentucky			x	ns				2	29
Louisiana	x	nu	nu	x	x	ns	--	4	67
Mississippi	x		---		x	x	x	4	67
North Carolina		x		x	x	x	x	5	71
Oklahoma	x	x	x	ns	x	ns	--	6	100
South Carolina	x			ns	x	x	x	5	71
Tennessee	x	x		x			x	4	57
Texas	x	x	x	ns	nu	ns	x	6	86
Virginia	x		x	ns			---	3	50
Regional Response	11	6	5	10	6	10	6	54	64
Regional Response Rate (%)	85	46	50	77	46	77	60	64	

Table D-1. Results of Nationwide Survey: Response by State, Region and Respondent Type (Continued)

State	Respondent Type							Regional Response	Response Rate (%)
	Forest Planner	State Forester	Admin. Offic'l	Budget Director	Legislator	Forest Industry	Environmental		
WEST									
Alaska	x	x	x	x	ns	x	ns	7	100
Arizona			---	x	ns	---		2	40
California	x	x	x	ns	x	x		6	86
Colorado	x	x	nu	nu	x	x		4	57
Hawaii	x		x	ns		---	x	4	67
Kansas	x		ns			x	ns	4	57
Montana	x	x	x		x	ns	x	6	86
Nebraska	x	x	x	ns		---	x	5	83
Nevada	x	x		ns	x	---		4	67
New Mexico	x		x		ns	ns	ns	5	71
North Dakota	x	x(d)	x		nu	---	---	3	60
Oregon	x	x	x	x	ns	x		6	86
South Dakota	x	x(d)	ns	ns	x	x	nu	6	86
Utah	x		---	ns		---	---	2	50
Washington	x	x	---	ns		x	x	5	83
Wyoming	x		---	x	x	x	x	5	83
Regional Response	15	10	10	11	10	10	8	74	74
Regional Response Rate (%)	94	63	83	69	63	100	57	74	
NATIONAL RESPONSE	44	30	28	33	25	30	26	216	68
NATIONAL RESPONSE RATE (%)	92	63	70	69	52	73	60	68	

x Usable response.
 nu Non-usable response.
 ns "Not sure" response
 x(d) Duplicative response (e.g., State Forester directly supervises planning).
 --- Suitable respondent not identified.

(1) Statewide forest resource planning programs in West Virginia and Idaho were inactive during survey.

APPENDIX E

Character of Statewide Forest Resources

Table E-1. Character of Statewide Forest Resources.

State	Total Forest Land(1)	Commercial Forest Land(1)				Growing Stock(1)		Manufacturing	
		Total	State	Federal	Forest Industry	Other Private	Annual Growth	Potential Growth	Value Added(2)
		(thousand acres)				(million cubic feet)		(\$millions)	
Southeast									
Alabama	21361	21333	202	800	4205	16119	1292	1910	2239
Arkansas	18282	18207	256	2718	3951	11282	918	1288	1197
Florida	17040	15330	492	1623	5319	7896	569	1001	1110
Georgia	25256	24812	128	1417	4318	18949	1757	1891	2405
Kentucky	nr	nr	nr	nr	nr	nr	nr	nr	nr
Louisiana	14558	14527	309	694	3761	9763	990	1348	974
Mississippi	16716	16504	461	1216	2996	11832	1093	1480	841
North Carolina	nr	nr	nr	nr	nr	nr	nr	nr	nr
Oklahoma	8513	4323	105	463	91	2764	117	233	275
South Carolina	12249	12176	233	862	2007	9074	756	840	1011
Tennessee	13161	12820	346	919	1121	10433	605	892	1321
Texas	23279	12513	56	740	3771	7946	738	1081	1901
Virginia	16417	15939	252	1670	1670	12347	823	1040	1300
West									
Alaska	119145	11150	2438	8317	---	289	127	836	nd
Arizona	nr	nr	nr	nr	nr	nr	nr	nr	nr
California	40152	16303	106	8569	2687	4941	791	1502	3423
Colorado	22271	11315	234	7962	15	3104	209	506	179
Hawaii	1986	948	442	12	---	494	1	147	---
Idaho	na	na	na	na	na	na	na	na	na
Kansas	1344	1187	10	27	---	1151	18	59	327
Montana	12876	12289	219	1313	362	10394	1093	1480	841
Nebraska	1029	789	12	67	---	710	15	30	98
Nevada	7683	134	5	61	8	60	2	7	334
New Mexico	18060	5538	171	3439	---	1927	79	266	59
North Dakota	422	405	10	114	---	281	5	17	---
Oregon	29810	24211	926	14201	5522	3562	1212	2452	2262
South Dakota	1702	1467	73	1032	16	345	46	57	37
Utah	15557	3405	239	2505	---	661	47	139	95
Washington	23181	17922	2266	6928	4319	4409	1301	1911	2058
Wyoming	10028	4334	111	3369	54	801	86	208	99

Table E-1. Character of Statewide Forest Resources (Continued)

State	Total Forest Land(1)	Commercial Forest Land(1)					Growing Stock(1)		Manufacturing
		Total	State	Federal	Forest Industry	Other Private	Annual Growth	Potential Growth	Value Added(2)
(thousand acres)							(million cubic feet)		(\$millions)

Northeast									
Connecticut	nr	nr	nr	nr	nr	nr	nr	nr	nr
Delaware	392	384	13	1	30	341	20	28	139
Illinois	3810	3692	11	269	17	3396	86	296	1755
Indiana	3943	3815	171	239	27	3378	106	225	936
Iowa	1561	1460	56	57	17	1331	50	75	360
Maine	17749	16864	468	73	8083	8240	750	1418	1392
Maryland	2563	2523	218	25	139	2141	111	203	507
Massachusetts	2952	2798	356	10	30	2402	142	186	nd
Michigan	19271	18778	3947	2472	2257	10102	704	998	1283
Minnesota	16709	13695	4992	2336	772	5595	463	856	1152
Missouri	12876	12289	219	1313	362	10394	182	563	833
New Hampshire	5013	4692	108	472	947	3165	252	355	445
New Jersey	1928	1857	291	28	16	1522	27	93	nd
New York	17218	14243	835	58	1177	12174	309	924	nd
Ohio	6147	6029	237	150	127	5515	191	457	1687
Pennsylvania	16826	15924	2968	503	964	11488	878	1498	2767
Rhode Island	404	395	32	---	---	363	17	22	107
Vermont	4512	4430	209	213	666	3342	109	323	218
West Virginia	na	na	na	na	na	na	na	na	na
Wisconsin	14908	14470	2934	1753	1148	8643	513	804	3918

nr	No response to state forest resource planner's questionnaire.								
na	Not actively planning.								
nd	Non-disclosure of data.								
---	No data or negligible amounts.-								

(1) Source: Forest Facts and Figures. 1979. American Forests Institute. Washington D.C.

(2) Data is total value-added for SIC 24 and SIC 26, 1982 Census of Manufactures, U.S. Department of Commerce.

APPENDIX F
Context Assessment Tables

Table F-1. Key Context Elements: Perceptions of State Forest Planners and State Foresters (1)

Context Element	Level of Agreement (%)	
	Forest Planner	State Forester
Adequacy of Planning Budgets		
Very Adequate	7	3
Adequate	60	63
Inadequate	21	20
Very Inadequate	2	10
Not Sure	10	3
Adequacy of Planning Time		
Very Adequate	32	10
Adequate	50	73
Inadequate	16	3
Very Inadequate	0	3
Not Sure	2	10
Degree of Technical Complexity		
Very Complex	2	7
Complex	16	23
Some Complexity	48	47
Little Complexity	34	23
Not Sure	0	0
Adequacy of Technical Planning Skill		
Very Adequate	21	17
Adequate	61	63
Inadequate	11	10
Very Inadequate	0	3
Not Sure	7	7

(1) Data includes State Forest Planners (N=44) and State Foresters (N=30).

Table F-2. Political Support of Key Constituents at Start and Completion: National Perceptions (1)

Constituents	Perceptions of Political Support (%)					Total
	High	Moderate	Low	None	Unsure	
Governor at Start	11	15	19	22	33	100
Governor at Completion	14	21	12	19	35	100
Legislature at Start	6	16	31	17	30	100
Legislature at Completion	12	24	23	12	30	100
(2) State Forester at Start	47	20	11	1	20	100
(2) State Forester at Completion	52	19	8	0	22	100
Other State Agencies at Start	3	29	35	9	25	100
Other State Agencies at Completion	9	38	20	8	25	100
Federal Agencies at Start	28	33	13	1	25	100
Federal Agencies at Completion	27	37	12	0	25	100
Forest Industries at Start	14	22	28	12	25	100
Forest Industries at Completion	21	24	20	9	27	100
Other Private Interests at Start	6	23	25	15	31	100
Other Private Interests at Completion	12	27	19	9	33	100

(1) Data includes four respondent groups: State Forest Planners, State Foresters, Administrative Officials, and Legislators. (N=127)

(2) Data includes three respondent groups: State Forest Planners, Administrative Officials, and Legislators. (N=97)

Table F-3. Political Support of Key Constituents: Regional Perceptions (1)

Perceptions of Political Support by Region (%)			
Constituents	North East	South East	West
Governor at Start			
High	9	15	9
Moderate	17	8	16
Low	11	15	30
None	30	19	14
Not Sure	32	42	30
Governor at Completion			
High	13	15	14
Moderate	23	12	23
Low	8	15	14
None	21	23	14
Not Sure	36	35	35
Legislature at Start			
High	9	0	5
Moderate	17	19	12
Low	28	27	37
None	23	12	14
Not Sure	23	42	33
Legislature at Completion			
High	19	4	7
Moderate	30	23	16
Low	13	27	33
None	11	12	12
Not Sure	26	35	33
(2) State Forester at Start			
High	44	50	50
Moderate	18	20	24
Low	18	5	6
None	0	5	0
Not Sure	21	20	21
(2) State Forester at Completion			
High	56	50	47
Moderate	13	15	29
Low	10	5	6
None	0	0	0
Not Sure	21	31	18
Other State Agencies at Start			
High	6	0	0
Moderate	28	27	30
Low	36	35	35
None	6	4	16
Not Sure	25	35	19

Other State Agencies at Completion				
High	15	4	5	
Moderate	43	32	35	
Low	13	20	28	
None	4	16	9	
Not Sure	25	28	23	
Federal Agencies at Start				
High	23	35	30	
Moderate	30	35	35	
Low	17	4	14	
None	0	4	0	
Not Sure	30	23	21	
Federal Agencies at Completion				
High	32	23	23	
Moderate	32	50	35	
Low	11	0	19	
None	0	0	0	
Not Sure	25	27	23	
Forest Industries at Start				
High	13	15	14	
Moderate	25	35	12	
Low	34	15	28	
None	9	15	12	
Not Sure	19	19	35	
Forest Industries at Completion				
High	30	15	12	
Moderate	21	42	16	
Low	19	12	26	
None	8	12	9	
Not Sure	23	19	37	
Other Private Interests at Start				
High	11	4	0	
Moderate	28	27	14	
Low	28	15	28	
None	6	15	26	
Not Sure	26	39	33	
Other Private Interests at Completion				
High	23	8	2	
Moderate	38	23	16	
Low	13	15	28	
None	2	12	16	
Not Sure	25	42	37	

-
- (1) Data includes four respondent groups: State Forest Planners, State Foresters, Administrative Officials, and Legislators. (N=127)
- (2) Data includes three respondent groups: State Forest Planners, Administrative Officials, and Legislators. (N=97)

Table F-4. Political Support of Key Constituents: Respondent Type Perceptions (1)

Perceptions of Political Support by Respondent Type (%)				
Constituents	Forest Planner (n=44)	State Forester (n=30)	Admin. Official (n=28)	Legis- lator (n=24)
Governor at Start				
High	5	3	15	25
Moderate	12	21	11	17
Low	24	21	22	4
None	36	31	11	0
Not Sure	24	24	41	54
Governor at Completion				
High	12	10	19	17
Moderate	19	24	22	17
Low	14	14	7	8
None	31	21	15	0
Not Sure	24	31	37	58
Legislature at Start				
High	2	7	7	8
Moderate	14	24	15	8
Low	31	28	33	33
None	31	21	4	4
Not Sure	21	21	41	46
Legislature at Completion				
High	2	10	22	17
Moderate	36	17	22	13
Low	29	24	19	17
None	19	14	4	4
Not Sure	14	35	33	50
(2) State Forester at Start				
High	48	--	48	46
Moderate	26	--	19	13
Low	19	--	7	0
None	2	--	0	0
Not Sure	5	--	26	42
(2) State Forester at Completion				
High	57	--	56	38
Moderate	24	--	15	17
Low	14	--	4	0
None	0	--	0	0
Not Sure	5	--	26	46
Other State Agencies at Start				
High	0	7	0	4
Moderate	21	35	26	38
Low	50	41	26	13
None	14	10	7	0
Not Sure	14	7	41	46

Other State Agencies at Completion				
High	2	18	11	8
Moderate	36	50	33	33
Low	36	14	15	4
None	10	11	7	4
Not Sure	17	7	33	50
Federal Agencies at Start				
High	36	31	22	17
Moderate	36	45	22	25
Low	17	24	4	4
None	2	0	0	0
Not Sure	10	0	52	54
Federal Agencies at Completion				
High	24	41	22	21
Moderate	45	41	30	25
Low	21	14	4	0
None	0	0	0	0
Not Sure	10	3	44	54
Forest Industries at Start				
High	7	14	11	29
Moderate	17	31	26	17
Low	38	45	15	4
None	24	7	4	4
Not Sure	14	3	44	46
Forest Industries at Completion				
High	10	31	22	25
Moderate	29	21	22	21
Low	26	35	11	0
None	19	3	4	4
Not Sure	17	10	41	50
Other Private Interests at Start				
High	5	7	7	4
Moderate	24	24	19	25
Low	26	35	22	17
None	26	21	4	0
Not Sure	19	14	48	54
Other Private Interests at Completion				
High	12	17	15	4
Moderate	29	31	26	21
Low	24	21	11	17
None	14	10	4	4
Not Sure	21	21	44	54

-
- (1) Data includes four respondent groups: State Forest Planners, State Foresters, Administrative Officials, and Legislators. (N=127)
- (2) Data includes three respondent groups: State Forest Planners, Administrative Officials, and Legislators. (N=97)

APPENDIX G
Process Assessment Tables

Table G-1. The Effective Use of Key Process Elements: National Perceptions (1)

Process Element	Level of Agreement (%)					Total
	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure	
Mission Definition	17	46	10	0	27	100
External Assessment	6	30	16	2	47	100
Forest Resource Assessment	9	40	12	3	36	100
Internal Assessment	13	43	10	2	33	100
(2) Issue Identification	14	43	13	1	30	100
Goals Development	17	53	3	0	27	100
Public Involvement	19	37	11	2	32	100
(2) Multiple Resource Assessment	15	46	12	2	25	100
(2) Contribution of Various Ownerships	17	42	7	2	34	100
(2) Alternative Strategy Development	7	37	15	3	37	100
(2) Strategy Evaluation and Selection	8	36	12	4	39	100
Planning and Budgeting Link	5	27	20	4	44	100
Implementation Strategies	5	37	15	4	40	100

(1) Data includes all seven respondent groups (N=216).

(2) Data includes six respondent groups (N=183), excluding State Budget Directors.

Table G-2. The Effective Use of Key Process Elements: Regional Perceptions (1)

Process Element	Level of Agreement by Region (%)		
	North East	South East	West
Mission Definition			
Strongly Agree	17	15	19
Agree	47	41	49
Disagree	14	6	8
Strongly Disagree	0	0	0
Not Sure	23	39	24
External Assessment			
Strongly Agree	8	6	3
Agree	33	24	30
Disagree	16	11	19
Strongly Disagree	3	0	3
Not Sure	40	59	46
Forest Resource Assessment			
Strongly Agree	13	4	10
Agree	43	45	31
Disagree	14	11	11
Strongly Disagree	3	0	4
Not Sure	27	40	45
Internal Assessment			
Strongly Agree	13	11	14
Agree	46	36	45
Disagree	13	11	5
Strongly Disagree	2	0	3
Not Sure	27	42	34
(2) Issue Identification			
Strongly Agree	22	16	3
Agree	50	30	43
Disagree	8	14	18
Strongly Disagree	0	0	2
Not Sure	20	40	35
Goals Development			
Strongly Agree	15	23	15
Agree	61	40	53
Disagree	2	4	4
Strongly Disagree	0	0	0
Not Sure	22	34	28
Public Involvement			
Strongly Agree	24	17	14
Agree	47	32	30
Disagree	5	13	18
Strongly Disagree	5	0	0
Not Sure	21	39	39

(2) Multiple Resource Assessment			
Strongly Agree	18	12	14
Agree	54	44	37
Disagree	8	14	16
Strongly Disagree	1	0	3
Not Sure	18	30	30
(2) Contribution of Various Ownerships			
Strongly Agree	25	9	11
Agree	47	35	40
Disagree	4	7	10
Strongly Disagree	1	2	2
Not Sure	22	47	38
(2) Alternative Strategy Development			
Strongly Agree	11	7	3
Agree	38	37	35
Disagree	13	12	21
Strongly Disagree	7	0	2
Not Sure	32	44	40
(2) Strategy Evaluation and Selection			
Strongly Agree	13	7	3
Agree	37	42	32
Disagree	8	7	21
Strongly Disagree	8	0	3
Not Sure	34	44	41
Planning and Budgeting Link			
Strongly Agree	8	4	3
Agree	26	23	30
Disagree	23	19	18
Strongly Disagree	6	2	4
Not Sure	38	53	46
Implementation Strategies			
Strongly Agree	7	8	0
Agree	39	30	39
Disagree	13	13	19
Strongly Disagree	7	2	1
Not Sure	35	47	41

(1) Data includes all seven respondent groups (N=216).

(2) Data includes six respondent groups (N=183), excluding State Budget Directors.

Table G-3. The Effective Use of Key Process Elements: Respondent Type Perceptions (1)

Process Element	Level of Agreement by Respondent Type (%)						
	Forest Planner (n=44)	State Forester (n=30)	Admin. Offic'l (n=28)	Budget Director (n=33)	Legis- lator (n=24)	Forest Industry (n=30)	Environ- mental (n=26)
Mission Definition							
Strongly Agree	34	27	11	6	12	17	4
Agree	46	60	54	30	48	37	50
Disagree	16	7	11	0	8	10	15
Strongly Disagree	0	0	0	0	0	0	0
Not Sure	5	7	25	64	32	37	31
External Assessment							
Strongly Agree	5	7	11	3	4	10	0
Agree	30	50	25	21	32	33	15
Disagree	34	13	7	7	16	10	15
Strongly Disagree	2	0	0	0	4	3	8
Not Sure	30	30	57	57	44	43	62
Forest Resource Assessment							
Strongly Agree	7	7	25	6	4	10	8
Agree	52	37	32	30	54	43	23
Disagree	27	17	7	3	0	7	15
Strongly Disagree	7	3	0	0	0	7	0
Not Sure	7	37	36	61	42	33	54
Internal Assessment							
Strongly Agree	30	10	14	6	8	7	4
Agree	52	53	46	30	50	33	31
Disagree	11	20	7	3	4	10	12
Strongly Disagree	0	3	0	0	0	7	4
Not Sure	7	13	32	61	38	43	50
(2) Issue Identification							
Strongly Agree	23	20	7	--	13	10	8
Agree	52	57	46	--	29	30	35
Disagree	11	13	11	--	13	10	19
Strongly Disagree	0	0	0	--	0	0	4
Not Sure	14	10	36	--	46	50	35
Goals Development							
Strongly Agree	27	30	14	9	13	13	4
Agree	66	53	64	33	46	43	62
Disagree	2	0	0	0	0	10	12
Strongly Disagree	0	0	0	0	0	0	0
Not Sure	5	17	21	58	42	33	23
Public Involvement							
Strongly Agree	18	27	21	15	16	17	15
Agree	41	53	39	15	48	33	31
Disagree	30	13	7	0	0	7	12
Strongly Disagree	2	0	0	0	0	0	12
Not Sure	9	7	32	70	36	43	31

(2) Multiple Resource Assessment							
Strongly Agree	25	10	14	--	8	23	4
Agree	52	70	46	--	42	27	31
Disagree	16	3	7	--	13	10	23
Strongly Disagree	0	3	0	--	0	0	8
Not Sure	7	13	32	--	38	40	35
(2) Contribution of Various Ownerships							
Strongly Agree	21	27	11	--	8	20	8
Agree	46	43	54	--	46	33	27
Disagree	9	3	4	--	4	7	12
Strongly Disagree	2	3	0	--	0	0	4
Not Sure	23	23	32	--	42	40	50
(2) Alternative Strategy Development							
Strongly Agree	11	7	7	--	8	7	0
Agree	43	53	36	--	38	27	19
Disagree	25	13	18	--	4	13	12
Strongly Disagree	5	0	0	--	0	3	12
Not Sure	16	27	39	--	50	50	58
(2) Strategy Evaluation and Selection							
Strongly Agree	11	17	7	--	4	7	0
Agree	43	57	32	--	42	23	15
Disagree	21	7	18	--	4	10	8
Strongly Disagree	9	0	0	--	0	3	12
Not Sure	16	20	43	--	50	57	65
Planning and Budgeting Link							
Strongly Agree	9	10	7	0	0	3	4
Agree	23	33	29	30	33	23	15
Disagree	32	40	14	6	4	17	19
Strongly Disagree	9	3	7	0	4	0	4
Not Sure	27	13	43	64	58	57	58
Implementation Strategies							
Strongly Agree	9	3	11	0	4	0	4
Agree	46	53	29	30	50	33	12
Disagree	21	17	21	9	4	10	19
Strongly Disagree	9	0	0	0	4	7	4
Not Sure	16	27	39	61	38	50	62

(1) Data includes all seven respondent groups (N=216).

(2) Data includes six respondent groups (N=183), excluding State Budget Directors.

Table G-4. Correlations between Process-Type and Key Process Elements (1)

Process Element	Level of Agreement by Process Type (%)			
	Issue Driven	Goal Driven	Inter-active	Issue/Goal Driven
Mission Definition				
Strongly Agree	14	13	21	33
Agree	48	61	14	47
Disagree	15	3	7	0
Strongly Disagree	0	0	0	0
Not Sure	24	23	57	20
External Assessment				
Strongly Agree	4	3	7	13
Agree	32	32	21	33
Disagree	19	7	21	10
Strongly Disagree	3	0	0	3
Not Sure	42	58	50	40
Forest Resource Assessment				
Strongly Agree	8	7	8	20
Agree	42	36	46	43
Disagree	15	7	0	7
Strongly Disagree	5	0	0	0
Not Sure	30	52	46	30
Internal Assessment				
Strongly Agree	14	7	0	17
Agree	45	39	31	60
Disagree	13	0	15	0
Strongly Disagree	2	7	0	0
Not Sure	27	48	54	23
(2) Issue Identification				
Strongly Agree	20	4	9	7
Agree	46	39	18	48
Disagree	11	15	18	15
Strongly Disagree	1	0	0	0
Not Sure	23	42	55	29
Goals Development				
Strongly Agree	15	13	31	23
Agree	55	55	31	57
Disagree	5	3	0	0
Strongly Disagree	0	0	0	0
Not Sure	25	29	39	20
Public Involvement				
Strongly Agree	17	19	14	23
Agree	42	29	29	40
Disagree	11	16	14	10
Strongly Disagree	3	0	0	0
Not Sure	27	36	43	27

(2) Multiple Resource Assessment				
Strongly Agree	17	12	9	19
Agree	48	39	36	59
Disagree	11	15	0	11
Strongly Disagree	1	8	0	0
Not Sure	23	27	55	11
(2) Contribution of Various Ownerships				
Strongly Agree	23	4	9	15
Agree	39	42	36	56
Disagree	10	0	9	0
Strongly Disagree	3	0	0	0
Not Sure	26	54	46	30
(2) Alternative Strategy Development				
Strongly Agree	10	0	18	4
Agree	36	31	27	52
Disagree	17	15	0	15
Strongly Disagree	5	4	0	0
Not Sure	32	50	55	30
(2) Strategy Evaluation and Selection				
Strongly Agree	11	0	9	7
Agree	36	35	36	44
Disagree	16	15	0	0
Strongly Disagree	6	4	0	4
Not Sure	31	46	55	44
Planning and Budgeting Link				
Strongly Agree	7	0	0	7
Agree	27	36	8	30
Disagree	23	10	31	17
Strongly Disagree	5	7	0	0
Not Sure	38	48	62	47
Implementation Strategies				
Strongly Agree	7	0	0	3
Agree	35	38	23	60
Disagree	16	23	15	3
Strongly Disagree	5	3	8	0
Not Sure	37	36	54	33

(1) Data includes all seven respondent groups (N=216).

(2) Data includes six respondent groups (N=183), excluding State Budget Directors.

APPENDIX H
Benefits Assessment Tables

Table H-1. The Achievement of Key Planning Benefits: National Perceptions (1)

Benefit	Level of Agreement (%)					Total
	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure	
Clearer Long-Term Direction	15	46	8	1	31	100
Improved Decision-Making Processes	8	35	11	1	44	100
Increased Program Compatibility	8	42	9	1	40	100
Improved Anticipation and Response	11	38	13	1	38	100
Improved Authority/Control System	5	26	19	1	49	100
Heightened Public Awareness	10	34	17	2	36	100
Heightened Policy-Maker Awareness	11	38	12	1	38	100
Increased Political Support (Budget)	6	22	24	8	40	100
Improved Communication/Coordination	11	42	8	1	38	100

(1) Data includes all seven respondent groups (N=216).

Table H-2. The Achievement of Key Planning Benefits: Regional Perceptions (1)

Benefit	Level of Agreement by Region (%)		
	North East	South East	West
Clearer Long-Term Direction			
Strongly Agree	19	9	14
Agree	44	52	43
Disagree	7	0	15
Strongly Disagree	1	2	0
Not Sure	28	37	28
Improved Decision-Making Processes			
Strongly Agree	14	6	3
Agree	26	43	41
Disagree	11	8	14
Strongly Disagree	1	0	3
Not Sure	48	43	41
Increased Program Compatibility			
Strongly Agree	11	4	7
Agree	43	42	42
Disagree	6	8	15
Strongly Disagree	0	0	3
Not Sure	40	47	34
Improved Anticipation and Response			
Strongly Agree	14	8	11
Agree	39	42	35
Disagree	11	9	16
Strongly Disagree	0	0	1
Not Sure	36	42	37
Improved Authority/Control System			
Strongly Agree	5	4	7
Agree	24	28	27
Disagree	21	15	20
Strongly Disagree	0	0	3
Not Sure	51	53	43
Heightened Public Awareness			
Strongly Agree	17	9	3
Agree	40	37	26
Disagree	16	13	22
Strongly Disagree	3	0	3
Not Sure	24	41	47
Heightened Policy-Maker Awareness			
Strongly Agree	15	6	10
Agree	38	46	34
Disagree	15	4	15
Strongly Disagree	1	0	3
Not Sure	32	44	39

Increased Political Support (Budget)			
Strongly Agree	9	6	3
Agree	24	25	19
Disagree	22	19	31
Strongly Disagree	9	6	8
Not Sure	36	45	39
Improved Communication/Coordination			
Strongly Agree	15	9	7
Agree	50	37	37
Disagree	6	6	14
Strongly Disagree	0	0	3
Not Sure	30	48	41

(1) Data includes all seven respondent groups (N=216).

Table H-3. The Achievement of Key Planning Benefits: Respondent Type Perceptions (1)

Benefit	Level of Agreement by Respondent Type (%)						
	Forest Planner (n=44)	State Forester (n=30)	Admin. Offic'l (n=28)	Budget Director (n=33)	Legis- lator (n=24)	Forest Industry (n=30)	Environ- mental (n=26)
Clearer Long-Term Direction							
Strongly Agree	16	17	21	6	20	20	4
Agree	57	60	43	30	48	33	46
Disagree	9	10	11	0	4	10	12
Strongly Disagree	2	0	0	0	0	0	4
Not Sure	16	13	25	64	28	37	35
Improved Decision-Making Processes							
Strongly Agree	5	7	18	6	13	10	0
Agree	50	50	21	27	42	17	35
Disagree	11	20	11	3	4	20	8
Strongly Disagree	2	0	4	0	0	0	4
Not Sure	32	23	46	64	42	53	54
Increased Program Compatibility							
Strongly Agree	11	7	18	6	4	7	0
Agree	43	53	39	30	58	37	39
Disagree	18	10	11	0	0	13	8
Strongly Disagree	0	0	4	0	0	0	4
Not Sure	27	30	29	64	38	43	50
Improved Anticipation and Response							
Strongly Agree	5	17	14	9	13	17	8
Agree	50	50	32	30	54	17	31
Disagree	16	17	14	0	4	20	15
Strongly Disagree	0	0	0	0	0	3	0
Not Sure	30	17	39	61	29	43	46
Improved Authority/Control System							
Strongly Agree	5	3	11	0	8	7	4
Agree	36	33	29	21	38	10	12
Disagree	32	30	21	6	4	17	15
Strongly Disagree	0	3	0	0	0	0	4
Not Sure	27	30	39	73	50	67	65
Heightened Public Awareness							
Strongly Agree	9	13	14	9	12	10	4
Agree	41	37	32	18	44	27	42
Disagree	25	23	18	3	12	17	19
Strongly Disagree	2	0	0	0	0	7	8
Not Sure	23	27	36	70	32	40	27
Heightened Policy-Maker Awareness							
Strongly Agree	9	10	18	6	8	17	8
Agree	52	43	32	24	44	33	35
Disagree	21	17	14	0	8	13	8
Strongly Disagree	2	0	0	0	0	0	8
Not Sure	16	30	36	70	40	37	42

Increased Political Support (Budget)							
Strongly Agree	9	7	11	0	4	10	0
Agree	21	23	18	27	38	23	8
Disagree	30	37	25	9	17	17	35
Strongly Disagree	11	13	4	0	8	10	8
Not Sure	30	20	43	64	33	40	50
Improved Communication/Coordination							
Strongly Agree	18	10	7	6	12	13	4
Agree	46	64	39	21	44	33	50
Disagree	11	7	7	0	4	13	15
Strongly Disagree	2	0	4	0	0	0	0
Not Sure	23	20	43	73	40	40	31

(1) Data includes all seven respondent groups (N=216).

Table H-4. Correlations between Process-Type and Key Planning Benefits (1)

Benefit	Level of Agreement by Process Type (%)			
	Issue Driven	Goal Driven	Inter-active	Issue/Goal Driven
Clearer Long-Term Direction				
Strongly Agree	15	10	14	27
Agree	44	52	43	57
Disagree	11	10	0	0
Strongly Disagree	2	0	0	0
Not Sure	29	29	43	17
Improved Decision-Making Processes				
Strongly Agree	9	7	0	13
Agree	31	39	31	57
Disagree	15	10	0	0
Strongly Disagree	2	3	0	0
Not Sure	44	42	69	30
Increased Program Compatibility				
Strongly Agree	6	10	0	20
Agree	45	45	23	47
Disagree	10	10	8	3
Strongly Disagree	0	7	0	0
Not Sure	40	29	69	30
Improved Anticipation and Response				
Strongly Agree	10	10	8	23
Agree	40	42	31	43
Disagree	15	13	8	0
Strongly Disagree	0	0	0	3
Not Sure	35	36	54	30
Improved Authority/Control System				
Strongly Agree	5	10	0	3
Agree	26	29	15	40
Disagree	21	13	15	13
Strongly Disagree	0	7	0	0
Not Sure	48	42	69	43
Heightened Public Awareness				
Strongly Agree	11	0	7	13
Agree	35	36	36	40
Disagree	20	16	14	7
Strongly Disagree	3	0	0	3
Not Sure	30	48	43	37
Heightened Policy-Maker Awareness				
Strongly Agree	9	10	7	23
Agree	39	32	43	40
Disagree	16	16	0	0
Strongly Disagree	2	0	0	3
Not Sure	34	42	50	33

Increased Political Support (Budget)				
Strongly Agree	6	3	0	13
Agree	22	23	31	27
Disagree	26	29	23	13
Strongly Disagree	9	3	0	13
Not Sure	37	42	46	33
Improved Communication/Coordination				
Strongly Agree	10	7	14	20
Agree	46	38	36	47
Disagree	11	10	0	0
Strongly Disagree	0	3	0	3
Not Sure	34	42	50	30

(1) Data includes all seven respondent groups (N=216).

APPENDIX I
Performance Assessment Tables

Table I-1. Key Performance Measures: National Perceptions (1)

Performance Measure	Level of Agreement (%)					Total
	Very High	High	Low	Very Low	Not Sure	
Importance of State Forest Planning	44	31	1	2	22	100
Fulfillment of Planning Purposes	14	39	10	4	33	100
Satisfaction with Planning Process	8	44	12	3	33	100
Satisfaction with Goals/Strategies	6	47	9	3	35	100
Adoption and Use	12	28	20	9	30	
Progress Toward Achieving Objectives	6	35	26	4	29	100

(1) Data includes all seven respondent groups (N=216), except for Adoption and Use (N=171) which excludes State Forest Planners.

Table I-2. Key Performance Measures: Regional Perceptions (1)

Performance Measures	Level of Agreement by Region (%)		
	North East	South East	West
Importance of State Forest Planning			
Very Important	51	43	37
Somewhat Important	31	28	34
Somewhat Unimportant	2	2	0
Very Unimportant	1	0	4
Not Sure	15	28	26
Fulfillment of Planning Purposes			
Very Effective	22	8	8
Somewhat Effective	36	42	41
Somewhat Ineffective	10	6	14
Very Ineffective	2	2	8
Not Sure	30	43	30
Satisfaction with Planning Process			
Very Satisfied	10	7	7
Satisfied	46	39	45
Dissatisfied	13	6	15
Very Dissatisfied	5	0	4
Not Sure	27	48	30
Satisfaction with Goals/Strategies			
Very Satisfied	8	9	2
Satisfied	50	41	49
Dissatisfied	10	4	11
Very Dissatisfied	5	0	3
Not Sure	27	46	37
Adoption and Use			
Often	14	10	12
Sometimes	27	29	29
Seldom	26	14	17
Never	10	2	14
Not Sure	23	45	29
Progress Toward Achieving Objectives			
High Degree	9	2	5
Some	39	38	29
Little	26	21	29
None	6	2	4
Not Sure	21	38	32

(1) Data includes all seven respondent groups (N=216), except for Adoption and Use (N=171) which excludes State Forest Planners.

Table I-3. Key Performance Measures: Respondent Type Perceptions (1)

Performance Measure	Level of Agreement by Respondent Type (%)						
	Forest Planner (n=44)	State Forester (n=30)	Admin. Offic'l (n=28)	Budget Director (n=33)	Legislator (n=24)	Forest Industry (n=30)	Environmental (n=26)
Importance of State Forest Planning							
Very Important	34	47	54	30	52	53	46
Somewhat Important	52	40	21	21	28	20	23
Somewhat Unimportant	2	0	0	0	0	0	8
Very Unimportant	0	0	0	0	0	7	8
Not Sure	11	13	25	49	20	20	15
Fulfillment of Planning Purposes							
Very Effective	14	20	18	12	17	13	0
Somewhat Effective	55	47	39	27	38	33	27
Somewhat Ineffective	14	17	14	3	0	7	15
Very Ineffective	5	3	4	0	4	7	8
Not Sure	14	13	25	58	42	40	50
Satisfaction with Planning Process							
Very Satisfied	14	20	4	3	12	3	0
Satisfied	57	57	46	21	40	37	42
Dissatisfied	18	17	11	6	4	13	8
Very Dissatisfied	0	0	4	0	4	3	15
Not Sure	11	7	36	70	40	43	35
Satisfaction with Goals/Strategies							
Very Satisfied	9	13	4	3	8	3	0
Satisfied	61	60	57	24	48	33	42
Dissatisfied	18	3	7	3	0	10	15
Very Dissatisfied	2	0	0	0	4	3	12
Not Sure	9	23	32	70	40	50	31
Adoption and Use							
Often	--	23	21	3	20	7	0
Sometimes	--	50	14	19	24	30	31
Seldom	--	17	32	9	20	20	23
Never	--	7	7	6	8	10	19
Not Sure	--	3	25	63	28	33	27
Progress Toward Achieving Objectives							
High Degree	9	3	7	6	12	3	0
Some	50	53	36	27	32	23	15
Little	27	37	25	3	20	30	42
None	2	3	4	0	0	7	15
Not Sure	11	3	29	64	36	37	27

(1) Data includes all seven respondent groups (N=216), except for Adoption and Use (N=171) which excludes State Forest Planners.

Table I-4. Correlations between Process-Type and Key Performance Measures (1)

Performance Measures	Level of Agreement by Process Type (%)			
	Issue Driven	Goal Driven	Inter-active	Issue/Goal Driven
Importance of State Forest Planning				
Very Important	43	42	36	57
Somewhat Important	33	29	29	23
Somewhat Unimportant	2	0	0	0
Very Unimportant	2	3	0	0
Not Sure	19	26	36	20
Fulfillment of Planning Purposes				
Very Effective	15	10	8	20
Somewhat Effective	37	45	39	47
Somewhat Ineffective	13	13	0	3
Very Ineffective	7	0	0	0
Not Sure	29	32	54	30
Satisfaction with Planning Process				
Very Satisfied	8	3	29	10
Satisfied	42	48	14	67
Dissatisfied	15	10	7	3
Very Dissatisfied	5	0	0	0
Not Sure	30	39	50	20
Satisfaction with Goals/Strategies				
Very Satisfied	6	3	7	10
Satisfied	48	45	29	67
Dissatisfied	11	13	0	0
Very Dissatisfied	5	0	0	0
Not Sure	31	39	64	23
Adoption and Use				
Often	14	13	9	13
Sometimes	26	29	27	33
Seldom	23	17	18	25
Never	12	8	0	4
Not Sure	26	33	46	25
Progress Toward Achieving Objectives				
High Degree	6	7	0	10
Some	35	39	29	43
Little	28	29	21	20
None	6	0	0	7
Not Sure	26	26	50	20

(1) Data includes all seven respondent groups (N=216), except Adoption and Use (N=171) which excludes State Forest Planners.

APPENDIX J

Profile of Minnesota's Statewide Forest
Resource Planning Program

Table J-1. Profile of Minnesota's Statewide Forest Resource Planning Program

Assessment Element	Respondent Type						
	Forest Planner	State Forester	Admin. Offic'l	Budget Director	Legislator	Forest Industry	Environmental
CONTEXT							
Previous Planning Culture	Yes	Yes	---	---	---	---	---
Initial Planning Purposes (1)	1,2,4	1,2,4	1,2,4	0	1,2,4	1,2,4	1,4
Budget Adequacy	2	2	---	---	---	---	---
Time Adequacy	2	1	---	---	---	---	---
Technical Complexity	-1	-1	---	---	---	---	---
Technical Skill Available	1	1	---	---	---	---	---
Political Support (2)							
Governor	0,0	1,1	1,1	0	1,2	---	---
Legislature	2,2	2,-1	2,2	0	0,2	---	---
State Forester	2,2	---	2,2	0	2,2	---	---
Other State Agencies	0,1	2,1	1,1	0	0,1	---	---
Federal Agencies	0,2	-1,2	2,2	0	0,2	---	---
Forest Industries	2,2	-1,2	2,2	0	2,2	---	---
Other Private Interests	0,1	-2,1	2,2	0	0,1	---	---
PROCESS							
Mission Definition	-1	2	2	0	1	1	1
Internal Assessment	2	0	1	0	1	0	0
External Assessment	0	1	1	0	-1	1	1
Forest Resource Assessment	1	0	2	0	1	1	0
Issue Identification	1	1	2	0	1	1	1
Goal Development	1	1	2	0	1	1	1
Public Involvement	1	1	2	0	1	1	1
Multiple Resource Assessment	1	1	2	0	1	1	0
Contribution of Ownerships	1	0	2	0	1	0	1
Alternative Strategy Development	1	1	2	0	1	1	0
Strategy Evaluation and Selection	1	1	2	0	0	1	0
Planning and Budgeting Link	-1	1	2	0	1	0	1
Implementation, Monitoring, and Evaluation	1	1	2	0	1	1	1

Table J-1. Profile of Minnesota's Statewide Forest Resource Planning Program (Continued)

Assessment Element	Respondent Type						
	Forest Planner	State Forester	Admin. Offic'l	Budget Director	Legislator	Forest Industry	Environmental
OUTPUTS							
Long-Term Direction	1	1	2	0	1	1	1
Decision-Making Processes	1	1	2	0	1	0	0
Program Compatibility	0	0	2	0	1	0	1
Anticipation and Response	1	1	2	0	1	0	1
Authority, Accountability, and Control	1	1	2	0	-1	1	0
Public Awareness	1	0	1	0	-1	1	1
Policy-Maker Awareness	1	0	1	0	-1	0	1
Political Support	-1	-1	0	0	1	2	0
Communication and Coordination	2	1	0	0	1	1	1
PERFORMANCE							
Importance of Planning	2	1	2	2	2	2	2
Purpose Fulfillment	1	1	2	0	1	2	0
Process Satisfaction	-1	1	2	0	1	1	0
Satisfaction with Goals, Objectives, and Strategies	-1	1	1	0	1	1	1
Adoption and Use (3)	1	-1	2	0	2	1	1
Progress Toward Implementation	1	1	1	0	2	-1	-1

Response Scale: 2 = Strongly Agree
 1 = Agree
 0 = Not Sure
 -1 = Disagree
 -2 = Strongly Disagree

- (1) Four identified purposes: 1 = To justify budget allocations for forestry programs.
 2 = To increase legislative and public understanding.
 3 = To fulfill federal grant requirements.
 4 = To establish long-term agency direction.
- (2) Political support at start and completion of planning.
- (3) Responses by State Forest Planners reflect their perceptions of the plan's use by others.

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