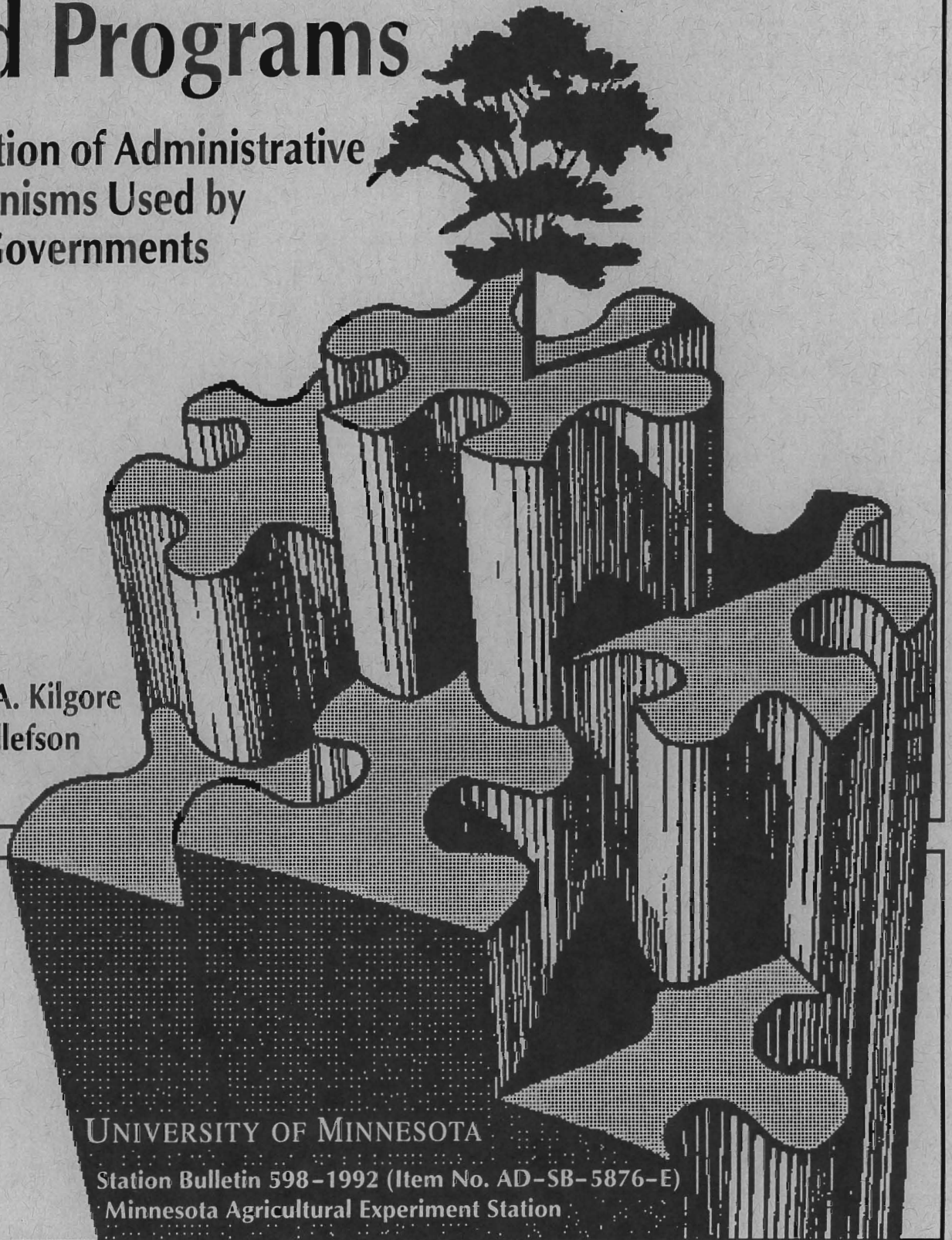


# Coordination of Forest Resource Policies and Programs

Evaluation of Administrative  
Mechanisms Used by  
State Governments

Michael A. Kilgore  
Paul V. Ellefson



UNIVERSITY OF MINNESOTA

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# Coordination of Forest Resource Policies and Programs

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### **INTRODUCTION**

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Public policies and programs directed at managing and protecting natural environments are rarely the responsibility of a single unit or level of government. Policy and program development and implementation is often delegated across a number of different units within government and between governments. In such situations, policy and program coordination can be especially important to the accomplishment of socially desirable objectives.

#### **COORDINATION DEFINED**

From an organizational perspective, coordination can be defined a number of ways. Some suggest coordination is the process whereby two or more organizations create or use existing decision rules for dealing collectively with a shared task (Rogers and Whetten 1982). Others propose coordination be defined in terms of the networks and techniques by which organizations interact with one another: the process by which they work toward jointly making decisions that will impact all participating parties (Warren et al. 1974 and Mott 1968). As used here, coordination is defined as the process by which two or more organizations arrange, match or harmonize policies and programs to achieve shared goals and objectives.

There are often multiple benefits and costs

associated with policy and program coordination. Ultimately, organizational involvement in coordinating activities can only be sustained if those involved in such activities perceive the benefits of doing so to be greater than the costs that result from their participation. Among the commonly perceived benefits of policy and program coordination are broadened support for common interests, improvements in the effectiveness with which information is exchanged and services delivered, increased communication among organizations sharing common goals, and greater continuity in the delivery of services and administration of programs.

Although coordination can produce tangible benefits, it can also result in significant costs. These include increased levels of conflict among organizations, loss of organizational autonomy and power, greater potential for compromised unworkable policies, and growth in the administrative costs necessary to support coordination efforts.

#### **COORDINATION METHODS**

Governments have developed a variety of approaches for bringing together major actors having a common interest in and influenced collectively by various public policies and programs. Although specific coordinating

mechanisms vary considerably according to purpose and level of government involvement, six major types of coordinating mechanisms can be identified:

- Informal communication links between agencies pursuing mutually beneficial activities (e.g., periodic joint meetings of the staff of different government units).
- Memorandums of agreement between agencies (e.g., written statements attesting to state and federal government responsibility for water pollution control).
- Information management systems designed to encourage uniformity in type, organization, and presentation of information (e.g., forest inventory systems).
- Programs and processes responsible for strategic planning of multiple subject areas (e.g., statewide forest resource planning programs).
- Formal administrative mechanisms charged with broad policy development and program coordination responsibilities (e.g., boards, councils, commissions).
- Agency reorganization designed to encourage more integrated planning and management (e.g., pollution control and natural resource management agencies merged to form a single department).

### **FORESTRY AND NATURAL RESOURCE PERSPECTIVE**

Specific coordination arrangements can take a variety of shapes and forms, serve a variety of functions, and establish various levels of authority over policy development and program implementation. There are common circumstances that often support the need for coordination activities. From a forest and natural resource perspective, coordination may be warranted for these reasons:

- Forest and natural resource affairs are typically broad in scope and pervasive to the interests of numerous public agencies. They are not always amenable to neat packaging into a single administrative unit of government.
- Forest and natural resource affairs are typically addressed by a variety of units within government and by different levels of government. They are dealt with by multiple

units and multiple layers of government agencies.

- Forest and natural resource affairs often suffer from the lack of a unified voice, with standing, in government. They are often advocated in a conflicting manner by various units of government and various governments.
- Forest and natural resource affairs are often addressed by conflicting and contradictory policies and programs which often result from the conflicting and contradictory missions of various units of government. They suffer in implementation because of opposing responsibilities of different units of government.
- Forest and natural resource affairs are often addressed by policies and programs that are the result of inefficient policy development processes involving overlapping responsibilities of agencies and types of government. Uncoordinated multi-agency involvement in policy development leads to inefficient policy development, irrespective of the substance of a policy or programs.
- Forest and natural resource affairs are frequently addressed by policies and programs that lack the benefit of multiple interest involvement in their development. They are void of benefits that can result from the focused efforts of a variety of individuals and units of government that have special concerns or expertise.
- Forest and natural resource affairs often suffer from the lack of unified executive agency postures vis-a-vis other segments of government, such as the state legislative or independent agencies and commissions. They lack respect in the eyes of others because of the narrowness of a single agency's policy concerns.
- Forest and natural resource affairs often lack the focused attention that can result from strategic comprehensive planning. They are often addressed by conflicting plans mandated by planning programs carried-out by multiple units of governments, each of which has responsibility for a narrow set of natural resources.

Natural resource programs implemented by government are often organized according to natural resource categories. At the state level, for example, there often exists separate organizational units for forestry, wildlife, fisheries, minerals, water and recreation.

Environmental protection agencies are often similarly organized by resources. This is evidenced by the vast number of states that treat air and water quality programs separately (Council of State Governments 1975 and 1988, Rabe, 1986). Even within a particular environmental program area, activities relating to environmental protection (e.g., monitoring, permitting, and environmental review) are typically organized and operated separate from one another with little or no recognition of the need to coordinate activities (Council of State Governments 1988).

Administration of forest and natural resource policies and programs by partitioning government agencies into a series of independent, divisible, largely unrelated units presumes that doing so results in certain government efficiencies (Rabe, 1986). Such approaches assume that narrowly defined subject areas can be more readily conceptualized, understood and managed than can larger, amorphous subject areas involving complex interactions across many different disciplines.

Fragmenting forest and natural resource programs along many lines unfortunately often creates problems when attempts are made to assess and understand their cumulative effectiveness.

The importance of addressing these difficulties via various coordinating mechanisms is increasingly acknowledged, especially by state governments (Council of State Government

1975 and 1989, Rabe 1986). State governments are recognizing that natural resource policies and programs are often targeted to very narrowly defined subject areas, when natural resource and environmental protection problems in fact extend into a variety of topical areas and involve many levels of government.

### **STUDY OBJECTIVES AND PROCEDURES**

Mechanisms used by state governments for coordinating the development and implementation of environmental and natural resource policies and programs were of major interest to the study. State forest resource programs were its focal point.

All of the nation's 50 state foresters responded to a mailed questionnaire seeking to determine the type and frequency of administrative mechanisms used to coordinate forest resource policies and programs within their respective states. The questionnaire also sought to determine the state foresters' perception of the effectiveness of such mechanisms.

In addition to the nationwide survey, case studies were carried out for California, Georgia, Florida, and Wisconsin. These case studies were designed to provide detailed information on specific mechanisms used to coordinate the development and implementation of forest resources policies and programs within state governments.

## **NATIONWIDE PERSPECTIVE ON COORDINATION**

### **PROGRAM TYPES AND FREQUENCY**

Many factors influence coordination needs among public agencies operating within a state's forestry sector. Of special importance are the type and number of programs implemented by state government, and the number and nature of agencies responsible for their implementation.

Ranging from as few as five to as many as 18, the agency within a state that has primary responsibility for forestry (i.e., lead forestry agency), administers an average of 12 major program types. Nationwide, 11 states have a

lead forestry agency that administers five to ten different programs, 25 have an agency responsible for 11 to 14 forestry programs, and 13 states have an agency responsible for 15 to 18 major forestry programs. Information for one state was not available.

The types of programs administered by a state's lead forestry agency are also quite variable. While nearly all such agencies (96 percent) implement programs that provide technical assistance to nonindustrial private forest landowners (NIPF), only five states administer programs designed to provide continuing

education for forestry professionals (Table 1).

In addition to forestry programs viewed as traditional to state forestry agencies (e.g., wildfire prevention and suppression), two-thirds of the agencies have also assumed responsibility for programs not typically associated with traditional forest management and protection activities (e.g., economic development and law enforcement).

solely responsible for administering forestry programs within their state, to one state forester who identified ten different public agencies as having major involvement in forestry affairs within his state.

Nineteen states have one to three agencies so involved, another 19 states have four to six agencies involved, and seven states have seven to ten agencies administering forestry programs within their state boundaries. Information was not available from five states.

**Table 1. Programs administered by state forestry organizations, by type and frequency of program. 1989.**

Program Type	Number of States	Proportion (percent)
Nonindustrial Private Forestry Assistance	48	96
Wildfire Suppression	46	92
Insect and Disease Control	45	90
Forest Planning	44	88
Urban Forestry	44	88
Reforestation Programs	43	86
Timber Sale Programs	43	86
Tree Nursery Programs	41	82
Prescribed Burning	39	78
Forest Resource Assessment	36	72
Forest Watershed Management	23	46
Forest Land Acquisition	20	40
Forest Road Development	20	40
Forest Tax Law Administration	19	38
Environmental Education	18	36
Private Forest Regulation	17	34
Forest Recreation Development and Administration	13	26
Environmental Review	12	24
Forestry Research	12	24
Forest Wildlife Management	7	14
Resource Information Systems	7	14
Professional Continuing Education	5	10

While a state's lead forestry agency administers forestry programs legally assigned to it, frequently there are additional government agencies that have responsibility for forestry programs of importance to a state (e.g., USDA-Forest Service, USDI-Bureau of Land Management, federal and state fish and wildlife departments, and county land departments).

States typically average having four government agencies (federal, state or local) administering forestry programs within state boundaries. The range is framed by four states whose foresters indicate their lead forestry agency as being

### EXTENT AND NATURE OF COORDINATION

State foresters perceive their forestry programs and activities to be fairly well coordinated with other organizations having similar forestry responsibilities. More than 90 percent (47 states) indicate their forestry programs as being either moderately or closely coordinated with the forestry programs of other organizations (ten states closely coordinated; 37 state moderately coordinated). Only three state foresters indicate that very little coordination occurred within their state. No state forester indicates the complete absence of forestry coordination activities.

While most state foresters agree that coordination of forestry activities is common within their state, the methods by which such coordination is accomplished varies considerably:

- Informal task forces (information sharing) ..... 44 states
- Formal forestry coordinating mechanisms ..... 37 states
- State planning agency or finance department ..... 5 states
- Governor's Office ..... 5 states
- Organizational consolidation ..... 3 states

As to perceived importance of each coordinating mechanism, informal task forces and formal coordinating mechanisms were, by far, the most important—more than 90 percent of responding state foresters indicated so. The three state foresters indicating that coordination had been achieved, in part, by organizational consolidation also ranked consolidation as the most important means of achieving coordination of forest management and planning activities within their state.



### CONDITIONS FACILITATING COORDINATION

State foresters suggest that a number of factors influence successful policy and program coordination (Table 2). Human propensity to communicate and cooperate informally was by far perceived as the most important factor. This was the only factor identified as having a medium to high degree of influence on coordination of state forestry programs and policies.

Of the remaining factors, those deemed to have the greatest influence on the overall success of coordination efforts were: techniques used to implement forestry programs; organizational structure of state government; and agency emphasis on integrated planning and management. The influence of state legal requirements was only slightly less.

The governor, the legislature, and public pressure are all perceived to have little impact on forestry program coordination within a state, while the design of natural resource information systems is viewed as being the least influential factor.

### NEED VERSUS OCCURRENCE OF COORDINATION

State foresters indicated that wildfire suppression programs require the highest degree of coordination with other organizations (Table 3). Similarly high in perceived need for coordination are insect and disease management programs, forest planning programs, and environmental education programs.

Although forest roads often cross many forest ownerships, the need for coordinating forest road programs was viewed by state foresters as an activity of low priority. Also perceived low in coordination need were forest tax programs, continuing education programs for forestry professionals, and timber sale administration programs.

State foresters generally cite state forestry programs as being coordinated at less than desirable levels. In all 22 state forestry program areas examined, the amount of coordination that actually occurs is less than the perceived need for such coordination (Table 3).

The greatest disparity between actual and needed coordination was for programs involving resource information systems. Substantial gaps also existed for watershed management programs in forested areas and regulatory programs focused on private forestry practices.

**Table 2. Factors influencing coordination of state forestry programs and activities. 1989.**

Factors	Degree of Influence *
Propensity to Informally Cooperate and Communicate	3.29
Techniques Used to Implement Forestry Programs	2.77
Organizational Structure of State Government	2.65
Emphasis on Integrated Planning and Management	2.58
State Legal Requirements (Legislation)	2.52
Governor's Leadership	2.26
Public Pressure for Greater Coordination	2.20
Legislative Leadership	2.18
Natural Resource Information System Design	1.60

\* Scale: 4=high, 3=medium, 2=low, and 1=none.

**Table 3. Need for and actual occurrence of coordination of state forest policies and programs. 1989.**

Activity	Composite Rating *	
	Need	Occurrence
Wildfire Suppression	3.68	3.46
Insect and Disease Control	3.50	3.25
Forest Planning	3.40	3.08
Environmental Education	3.39	3.09
Forest Watershed Management	3.29	2.62
NIPF Assistance	3.23	2.91
Forest Resource Assessment	3.20	2.85
Urban Forestry	3.15	2.82
Prescribed Burning	3.13	2.71
Environmental Review	3.07	2.66
Resource Information Systems	3.04	2.38
Forest Wildlife Management	3.00	2.73
Forest Land Acquisition	2.93	2.58
Forestry Research	2.93	2.75
Private Forest Practice Regulation	2.87	2.29
Forest Recreation Development and Management	2.84	2.46
Reforestation Programs	2.83	2.59
Tree Nursery Programs	2.82	2.65
Timber Sale Programs	2.75	2.34
Professional Continuing Education	2.72	2.40
Forest Property Tax Law Administration	2.71	2.27
Forest Road Development	2.46	2.08

\* Scale: 4=strong, 3=medium, 2=little, and 1=none.

While the discrepancy between the need for and the actual occurrence of coordination activities was often viewed as substantial, for some programs areas the difference was slight. For example, wildfire suppression programs, which state foresters acknowledge as needing the greatest level of coordination of the 22 forestry programs or activities examined, also had the highest rating in terms of the amount of coordination that actually occurs. In fact, the leading two program areas for which state

foresters indicated the greatest need for coordination (i.e., wildfire suppression, insect and disease control) also lead in terms of actual coordination. Similarly, forest road programs and forest tax law programs, which received the lowest rating of coordination need, were also viewed by state foresters as having the least amount of actual coordination.

**OBSTACLES TO COORDINATION**

Lack of information about trends in status of forest resources and of forestry programs generally was viewed by state foresters as the greatest obstacle to achieving greater coordination among forest policies and programs (Table 4). Other cited obstacles were administrative resistance to changing political, institutional and administrative environments, and the lack of communication within and between state government agencies generally.

Lack of intragovernmental communication is perceived to be a greater obstacle to achieving coordination of forestry policies and programs than is a lack of intergovernmental communication (contact with forestry interests in other units of government such as county and federal units). Ironically, the fragmentation of forestry responsibilities among different organizations within a state is perceived as least obstructive to achieving coordinated state forest policies and programs. This is despite most states having a number of organizations (an average of four) responsible for forestry administering state forestry programs.

**Table 4. Obstacles to achieving effective coordination of state forest policies and programs. 1989.**

Obstacles to Coordination	Composite Rating*
<b>Lack of Forestry Information</b> (e.g., resource trends, social and economic trends, program trends)	2.32
<b>Administrative Resistance to Change</b>	2.30
<b>Lack of Intragovernmental Communication</b> (e.g., between forestry, wildlife, recreation, and water units within a department)	2.29
<b>Failure to Translate Statewide Policies and Objectives into Plans</b>	2.27
<b>Absence of Statewide Forest Policy Statements</b>	2.26
<b>Lack of Intergovernmental Communication</b> (e.g., between units of state, regional, and federal governments)	2.20
<b>Lack of Executive Leadership</b>	2.20
<b>Poor Forestry Program and Plan Implementation</b>	2.12
<b>Fragmented Forestry Responsibilities Among Many Agencies</b>	1.87

\* Scale: 4=very significant, 3=somewhat significant, 2=little significance, and 1=no significance.

**COORDINATION BY FORMAL MECHANISMS**

**FREQUENCY AND ESTABLISHMENT**

Formal mechanisms for coordinating forest policies and programs are fairly common occurrences in state governments (Table 5). Thirty-one states (62 percent) have a board, council, commission, committee or similar mechanism that is authorized to coordinate the development and implementation of forest resource policies and programs.

Size of state, in terms of either forest land area or number of organizations responsible for forestry programs, is apparently not a factor in

determining whether a state chooses to establish a formal coordinating mechanism. For example, Rhode Island (368,000 acres of forest land) has established a state forestry planning committee responsible for developing and coordinating statewide forest policies and plans. By contrast, Alaska, with 129 million acres of forest land, reports no formal mechanism for coordinating forest policies and programs. Additionally, there are states that have a single lead forestry agency and also have a formal coordinating mechanism, while other states with as many as seven major forestry agencies lack any formal coordinating mechanism what-so-ever.

**Table 5. Formal mechanisms used by state governments to coordinate forest policies and programs. 1989.**

<b>State</b>	<b>Coordinating Mechanism</b>
Alabama	Alabama Forestry Planning Committee
Arkansas	Arkansas Forestry Commission Board of Forestry
Florida	Florida Forestry Council
Georgia	Georgia Forestry Commission
Idaho	Forest Practices Act Advisory Committee
Illinois	Forestry Council
Indiana	State Forestry Planning Committee
Kentucky	(Name not assigned)
Louisiana	Louisiana Forestry Commission
Maine	Citizen's Forest Advisory Council
Massachusetts	Massachusetts State Forestry Committee
Michigan	Michigan Council on Forest Product Industrial Development
Minnesota	Minnesota Forestry Coordinating Committee
Mississippi	Mississippi Forestry Commission
Missouri	Missouri Forest Resource Planning Committee
Montana	Land Board
Nevada	Board of Forestry
North Carolina	North Carolina Forestry Advisory Council
North Dakota	Forestry Planning Committee
Ohio	Forestry Advisory Council
Oregon	State Board of Forestry
Rhode Island	State Forestry Planning Committee
South Carolina	South Carolina Forestry Commission
Tennessee	Tennessee Forestry Commission
Utah	Board of State Lands and Forestry
Vermont	Forest Resources Advisory Council
Virginia	Forestry Board
Washington	Board of Natural Resources
West Virginia	Forest Management Review Commission
Wisconsin	Natural Resources Board

All 31 states reporting the existence of a formal forestry coordinating mechanism established the mechanism by one of two means: state law or informal agreements among forestry agencies. The former was the most common means, accounting for 77 percent of all forestry coordinating mechanisms. Only seven state foresters cited informal agreements as a means of establishing a formal coordinating mechanism.

States established formal coordinating entities for a variety of reasons. The major categories into which these reasons mostly fell were: to provide a means of responding to an especially important environmental or natural resource issue (eight states); as the result of recommendations contained in a legislative study report (seven states); or following recommendations of an independent study commission (one state).

Ten state foresters presented reasons that did not fit these major categories (e.g., recommendations of the USDA-Forest Service). In five states, no singly important event was cited as leading to the establishment of a formal coordinating mechanism.

Among the important environmental or natural resource issues that led eight states to establish a formal coordinating mechanism were: clearcutting and silvicultural practices, fire protection and reforestation, water quality management in forested areas, forest protection and reforestation, poor economic climate within a state, and the zoning of forest lands for nontimber values.

### **MEMBERSHIP AND FUNCTIONS**

Formal coordinating mechanisms for forestry programs within states have an average membership of 11 persons, but range from five to 30 individuals. The average is, however, inflated by mechanisms in two states having 25 members 30 members respectively. Over one-half of all formal mechanisms to coordinate state forestry activities limit membership to ten or less.

Interest representation on formal coordinating mechanisms is very diverse. As a group, forest industry is represented more frequently than any other interest, being present on 18 coordinating mechanisms established for forestry. This represents 58 percent of all such entities. Following industry representation closely are

public agency interests (e.g., USDA-Forest Service, state forestry departments) which formally participate in 52 percent of all such coordinating mechanisms (Table 6).

**Table 6. Representation on formal forestry coordinating mechanisms of state governments, by frequency and average number per mechanism. 1989.**

Affiliation	— Represented — Percent of Time	Average Number	Composite Index of Repre- sentation
Public Forest Managers	52	3.68	1.00
Forest Industry	58	2.72	0.82
Citizen Members	39	3.41	0.69
Academic and Research Personnel	42	1.84	0.40
Fish and Wildlife Managers	45	1.35	0.32
Local Elected Officials	10	5.33	0.28
Agricultural Agencies	35	1.36	0.25
Legislators	10	4.66	0.24
Landowner Associations	26	1.37	0.19
Environmental Groups	29	1.11	0.17
Trade Associations	19	1.50	0.15
Soil and Water Districts	26	1.12	0.15
Forest Land Management Agencies	13	2.00	0.14
Private Forest Owners	6	2.00	0.06
Sporting Groups	10	1.00	0.05
State Conservation Agencies	6	1.50	0.05
Livestock Industry	6	1.50	0.05
Pollution Control Agencies	6	1.00	0.03
Society of American Foresters	6	1.00	0.03
Departments of Education	6	1.00	0.03
Office of the Governor	6	1.00	0.03
Forestry Consultants	6	1.00	0.03
State Planning Agencies	3	1.00	0.02

Publicly employed fish and wildlife managers and persons from academic and research organizations are common to 45 and 42 percent of all forestry coordinating entities, respectively.

Interest representation assessed via a composite index presents a somewhat different picture. Index is the product of the average number of individuals representing a particular interest and the frequency with which that group exists on a forestry coordinating entity, ordinaly ranked with a maximum value of one (Table 6).

Public forest managers have the highest indexed rating of representation of any group. Forest industry representatives and citizen members

are, respectively, the second and third most represented groups. Researchers, scientists and other academicians are fourth, although their composite rating of representation is only 40 percent of the value for public forest managers. Similarly, fish and wildlife managers (the fifth most represented organization) have a rating approximately one-third that of public forest managers.

Environmental, sporting and conservation groups, often perceived as having more than average influence over the use and management of forests, are very modestly represented on formal forestry coordinating bodies.

Only two of the 31 states having formal forestry coordinating mechanisms use public election processes for determining membership on their board or commission. All others rely on appointment processes typically involving the Governor, although a few states delegate appointment authority to the state forester or to other heads of state natural resource agencies. One state entrusts appointment authority to its University's Board of Regents. The term of individuals appointed to a forestry coordinating entity typically is four years, although terms may be as short as two years or as long as nine.

Most state foresters (79 percent) indicate satisfaction with the membership composition of formal forestry coordinating entities. Of those expressing concern, such concern typically is with the narrow nature of interest representation on the coordinating mechanism.

This sentiment is not uniformly expressed by all state foresters. One suggests that the membership of the state's formal coordinating mechanism be reduced in size and that special interests currently represented be eliminated. Another state forester expressed dissatisfaction with the level of forestry knowledge of members on the state coordinating board, believing that future appointments should be individuals that have generous knowledge of forestry and forest resource issues.

Formal forestry coordinating mechanisms serve a variety of functions within state government, the most common of which is coordinating the development of statewide forest policies (Table 7). Seventeen (55 percent) are viewed by state foresters as playing a role in oversight and evaluation of forestry programs, whereas approximately half of the coordinating entities are viewed as involved in the development of

long range or strategic forestry plans for their state.

Four states use their coordinating mechanism to guide regulation of forestry practices of private forest and owners, while three use such entities as a forum from which state forestry officials can discuss forestry issues and share information of mutual concern. Two states have formal forestry coordinating mechanisms that take a major role in budget development, and one state uses its forestry coordinating mechanism for the appointment of the state forester.

When they have been established, however, by informal agreements among state forestry leaders, only two of the seven formal coordinating mechanisms have been assigned coordination of state forest policy development as a primary responsibility. Alternatively, most entities created by informal agreements provide coordinating functions that are less visible. These functions include program coordination, strategic and long range planning, program oversight and information sharing.

**ACCOUNTABILITY AND EFFECTIVENESS**

**Table 7. Primary functions of formal forestry coordinating mechanisms of state governments. 1989.**

Function	Number of States	Proportion (percent)
Policy and Program Development	18	58
Program Oversight and Evaluation	17	55
Long Range and Strategic Planning	16	48
Program Evaluation	10	31
Regulation of Private Forestry	4	14
Information Sharing	3	10
Fiscal and Budget Development	2	7
State Forester Appointment	1	3

Formal forestry coordinating mechanisms are accountable to a variety of entities. More than one-third of the responding state foresters (12 states) indicated their coordinating entity reported to the director or other administrative leader of the state's lead forestry agency, or to the head of a state's natural resources department. Nine state foresters indicated that formal coordinating mechanisms were accountable directly to the governor, while seven indicated that the state legislature asserted such control. In three states, control is shared, typically between the governor and the legislature.

Four state foresters indicated that their state's respective formal coordinating mechanisms were not directly accountable to any particular individual or unit of government. Such was rather unexpected, since the function of coordinating mechanism in these four specific states is not just advisory in nature, but rather includes coordination of statewide forest policy development.

Twenty-six of the state foresters involved in states with formal forestry coordinating mechanism indicated that even if given the authority to do so, they would not change the major functions and duties of their board or commission. Such can be perceived as a measure of the success of these coordinating mechanisms.

The means by which a coordinating mechanism is created has substantial influence on its primary functions. For example, of the 18 formal coordinating mechanisms given authority for statewide development of forest resources policies, all but two are creations resulting from legislation enacted by their state legislatures. Similarly, all four coordinating entities with regulatory responsibilities are a product of legislative action.

Twenty-eight of the 31 responding state foresters of states with formal coordinating mechanisms cited their respective mechanisms as being either somewhat effective or very effective in coordinating forestry activities in their state (split equally between the two responses). In two of the states the formal forestry coordinating entities were viewed as somewhat ineffective in accomplishing their objectives. Only one state forester was of the opinion that the state's formal coordinating mechanism was very ineffective.

When asked to judge the usefulness of formal coordinating mechanisms to various individuals and organizations in a state, the foresters identified state forestry officials as receiving

**Table 8. State forester perception of the usefulness of formal forestry coordinating mechanisms to various organizations. 1989.**

Affiliation	Degree of Usefulness*
State Forestry Officials	3.40
Coordinating Mechanism Members	3.13
Coordinating Mechanism Staff	3.05
State Legislators	2.96
Forest Landowner Associations	2.96
Office of the Governor	2.96
Forest Industry	2.90
Federal Forestry Officials	2.88
Conservation Organizations	2.69
Other State Agencies	2.58
County Forestry Officials	2.38
Environmental Organizations	2.27

\* Scale: 4=very useful, 3=somewhat useful, 2=limited usefulness, and 1=not useful.

substantial benefit from a formal coordinating mechanism (Table 8).

Other groups and individuals were also perceived as placing relatively high value on the existence of formal forestry coordinating mechanisms. Those cited included the members and the staff of the coordinating entity, forest landowner associations, the state legislature and the office of the governor.

Environmental organizations and county forestry officials were perceived by state foresters as being the most pessimistic about the usefulness state forestry coordinating entities.

Coordinating mechanisms that have as their primary function the coordination of policy development in a state are perceived by state foresters as being more effective in such a role than when performing other functions. All but four of the 14 state foresters who perceived their coordinating mechanisms as being very effective had mechanisms with that as their primary function.

There was no equally clear link between coordinating entities perceived as very effective and the specific individuals or groups that such entities report to. However, in all instances where forestry coordinating entities were perceived as either somewhat or very

ineffective, the coordinating entity was not directly accountable to any particular individual or organization.

### IMPACT ON FOREST OWNERSHIPS

Certain forest ownerships are impacted more by the activities and actions of a state's formal coordinating entity than others (Table 9). In the opinion of state foresters, the use and management of state forests is influenced by the actions of coordinating bodies more than any other ownership category.

Forest land owned by the federal government (National Forest System and other federal landowners such as the USDI-Bureau of Land Management) were perceived by state foresters as being least affected by state coordinating entities. Such is partly due to the limited ability of state government actions to influence policies guiding the use and management of federal lands.

**Table 9. State Forestry Coordinating Mechanism Influence on the Forestry Activities of Forestland Owners as Perceived by State Foresters, by Ownership Category. 1989.**

Ownership Category	Degree of Influence*
State Forests	3.26
Private Nonindustrial Forests	2.84
Private Industrial Forests	2.42
County/Municipal Forests	2.23
National Forests	1.84
Other Federal Forests	1.63

\* Scale: 4=high, 3=medium, 2=low, 1=none.

### MAJOR FORMAL COORDINATING MECHANISMS

The form and function of formal mechanisms used by states to coordinate forest resource policies and programs is richly diverse. However, four general categories can be discerned, namely: forestry boards, forestry commissions, forestry councils, and forestry

committees (Table 10). General characteristics can be commonly associated with each of these categories.

**FORESTRY BOARDS**

Of eight states using boards for forestry coordination, six are located in western or southwestern United States. While forestry is the primary focus of such boards, frequently they are also responsible for nonforestry activities.

While half the forestry boards deal exclusively with forestry matters, an equal number deal with subjects concerning statewide natural resource coordination or with matters concerning state land use and management interests generally (coordinating mechanisms often referred to as "land boards"). Three of the boards play a major function in regulating the forestry activities of private landowners.

Averaging just under eight persons, the number of members serving on boards used to coordinate forest programs and policies is the smallest of the four general categories of coordinating mechanisms. This board type also includes both of the state coordinating entities to which members may be popularly elected rather than appointed.

All eight of the forestry boards identified were created by action of the state legislature. And while the reasons for their existence differs, in only one state was there apparently no particular event or issue that precipitated a boards' establishment. In terms of their accountability, four state boards report directly to the governor, one reports to the state legislature, and one reports to the department head overseeing state forestry programs.

All but one of the forestry boards are viewed by state foresters as being quite effective in terms of developing and coordinating statewide forest policies and programs. The two land boards that deal with forestry issues as part of a broader mandate are perceived as fairly ineffective in providing coordination leadership, possibly because they are not accountable to any particular entity.

**COMMISSIONS**

Seven states have chosen to establish forestry commissions. All of these states are located in southern and southeastern United States.

**Table 10. Major Formal Coordinating Mechanisms for State Forestry Programs and Policies, by Selected Characteristics. 1989.**

Characteristic	Board	Commission	Council	Committee
Number of States Using	8	7	7	9
Average Size	7.75	9.43	13.6	14.11
Method of Selection	A/E	A	A	A
Means of Creation	L	L	L	L/la
Predominant Accountability	G	L	C	C
Primary Functions	Pd	Pd	PI	PI,D
Relative Effectiveness	2nd	1st	2nd	3rd
Influence on Ownerships	2nd	1st	4th	3rd

Key: A=Appointed, E=Elected, L=Legislature, la=Informal Agreements, G=Governor, C=Department Head, Pd=Policy Development, PI=Long-Range and/or Strategic Planning, and D=Discussion of Forestry Issues.

The membership of forestry commissions is slightly larger than that of forestry boards, averaging just over nine members per commission. All commission members are appointed, their average term being just over six years—the longest average term of appointment of the major categories of formal coordinating mechanism. None of the seven commissions have member appointments of less than five years. The longest appointment, for nine years, is also the longest to any forestry coordinating entity.

As with forestry boards, all forestry commissions were created by legislative action. All but one were the results of occurrences of a major forestry issue. Two forestry commissions report to both the governor and the legislature. One commission has no direct accountability.

Functionally, seven of the eight forestry commissions have forest policy development and long range and strategic planning as a primary responsibility. Program evaluation and overview is also a significant function for five of the commissions. Four commissions focus strictly on the coordination of state forestry programs. Both formal coordinating mechanisms that are involved in fiscal development and management of state forest activities are forestry commissions.

Forestry commissions are perceived by state foresters to be the most effective of the four categories of formal coordinating mechanisms. Four of seven state foresters involved with

commissions view commissions as a very effective means of coordinating the development and implementation of forest policies in their state. The other three state foresters involved with forestry commissions view them as somewhat effective.

### COUNCILS

Seven states, all located in Eastern United States, use forestry councils as forestry coordinating mechanisms. Their size tends to be substantially larger than commissions or boards, averaging over 13 members per council. This compares to an average 7.75 members for boards and 9.43 for commissions. Council member numbers are, however, quite variable, ranging from five to 25 members.

Although states with forestry councils appoint council members, not all have designated terms for membership. Of those that do, the average length of service is just under four years.

All seven forestry councils were created by legislative action. Unlike nearly all forestry boards or commissions, however, the enabling legislation for three councils was not a response to a specific forestry or natural resource issue. Only two councils were established in response to an important environmental issue. The other two were established as a result of legislative studies conducted in their respective states.

The majority of forestry councils are accountable to state natural resource department heads, although two report to the legislature and one to the governor.

As a group, councils are less involved in coordinating the development of statewide forest policy than are forestry boards or commissions. Only three councils are charged with doing so. More typical is a council's role in providing program oversight and evaluation—a function recognized by five of the seven forestry councils. Long range and strategic planning is also a major function common to four forestry councils.

Forestry councils are perceived to be equally effective as forestry boards in coordinating state forest policies and programs. Two state foresters indicated that forestry councils are very effective, while state foresters in the other five states with councils perceive such coordinating mechanisms as somewhat effective. However,

given the often less visible role of forestry councils relative to boards in terms of accountability and function, perceived effectiveness may have more to do with what is expected rather than their actual role as a coordinator of policies and programs.

Of the four categories of formal coordinating mechanisms, forestry councils are perceived least effective in influencing land management practices on forest land within a state.

### COMMITTEES

Nine states have formal forestry committees, making that the most common of the four categories of formal coordinating mechanisms. Forestry committees are also probably the most diverse in form and function.

Membership in formal forestry committees averages over 14, making it the largest among the four categories. The range in sizes is broad, with three states having only eight member committees while another has as many as 30 members. All states appoint members to their forestry committee. Few have designated terms.

In contrast to boards, commissions or councils—all of which were established by state law—only two committees were legislatively established. Seven of the nine forestry committees were established by informal agreements involving the state forester and other forestry leaders within a state.

In part because of the way in which they were established, none of the nine forestry committees report to the legislature or the governor. Nearly all report in an advisory capacity to a state environmental or natural resources department head. Two forestry committees are accountable to no particular entity. Also in contrast to boards, commissions or councils, forestry committees typically lack any specific or significant event that resulted in their establishment.

Forestry committees vary considerably in terms of functions, ranging from being responsible for development of forest policies to being simply a forum within which important forestry issues can be discussed.

Forestry committees generally deal less with policy development than boards, commissions or councils. They tend to serve as a means of



bringing various forestry interests within a state together to discuss forestry matters of mutual concern.

Interestingly, each of the three state foresters expressing a desire to modify the function and expand the authority of their coordinating bodies utilize forestry committees. They cite an

interest in enhancing committee ability to influence the coordination of statewide forest policies and programs. In part, this desire reflects state forester attitude toward the effectiveness of forestry committees—they were rated the least effective formal mechanism for coordinating forest policies and programs.

## **COORDINATION BY POLICY STATEMENTS, PLANNING PROGRAMS, INFORMATION SYSTEMS AND RELATED MECHANISMS**

Formal mechanisms are by no means the only manner in which state governments attempt to coordinate the development and implementation of forest policies and programs. States also use formal policy statements, statewide forest planning programs, resource information systems, interagency agreements, agency reorganization, and informal communication. Consider the nature and effectiveness of these approaches.

used to guide the direction of state forestry programs. Although statewide in nature, these plans often include both comprehensive strategic direction for forestry as well as more detailed programmatic direction. Formal statements issued by the head of a state's natural resource department are the second most common type of formal policy statement used to coordinate and direct forestry programs.

### **FORMAL POLICY STATEMENTS**

Formal statements of policy are often used by states to focus an agency's mission or activities. These statements typically lack the specificity associated with more detailed program documents. They focus instead on large concepts and visionary direction.

Policy statements affecting forestry programs at the statewide level originate from a variety of sources within state government. In addition to the state forester, policy statements frequently emanate from the governor, the legislature, and the heads of state agencies that are responsible for environmental and natural resources policy generally.

Formal policy statements are commonly used to provide direction and coordination for state forestry programs, and all but two states have such statements. There are 22 states with statements that originate from more than one source (Table 10).

By far, statewide forest management plans are the most common source of policy statements

### **STATEWIDE FOREST PLANNING**

Statewide forest planning activities can be an important means of coordinating forest policies and programs both within and among various

**Table 10. Frequency of formal policy statements used to coordinate state forest policies and programs, by type of statement. 1989.**

Type of Policy Statement	Number of States
Statewide Forest Management Plan	22
Departmental-Level Statement	17
State in State Law*	11
Governor's Office Statement	4
Department-Level Strategic Plan	2
Statewide Comprehensive Resource Plan	1
Lack of Clearly Identifiable Formal Policy Statements	2

\* Seven states carry out coordination activities in concert with a policy statement contained in a state environmental policy act.

levels of government (Pearsall 1984). Gray and Ellefson (1987) found that such activities frequently were a major reason for improved coordination and communication among various forestry organizations operating within a state.

Every state coordinates state forestry programs with plans established for other purposes, although in general the degree of coordination is viewed as quite modest by state foresters (Table 11). State foresters agree that only when considering matters of surface water quality are state forestry programs coordinated more than moderately with broader nonforestry programs. Coordination with state population and growth plans are viewed as subject areas to which forest policies and programs are least coordinated.

While most states maintain a forest resource information system, slightly fewer than three out of every ten (14 states) link such systems to a larger statewide natural resource or environmental information system. Of those that do, the majority (10 states) consider the link to be at least somewhat or very important as a means of encouraging coordination among programs and organizations.

Four state foresters were not enamored with information systems as a means of fostering coordination. One indicated that such linkages were of little or no benefit to resource management and planning activities.

**INTERAGENCY AGREEMENTS**

Interagency agreements are also a method of facilitating coordination. They usually specify detailed organizational responsibility for a particular task (e.g., fire prevention and protection). All but one state forester indicated use of interagency agreements to formalize responsibilities and coordination among organizations commonly dealt with. Twenty state foresters indicated such agreements to be very effective; and 25 others viewed them as at least somewhat effective in accomplishing programs and policy coordination goals. In only 3 states were they perceived as being somewhat ineffective. No state considered them to be very ineffective.

State foresters were asked to identify the three organizations or programs areas with which their organization has the most interagency agreements (Table 12). Of those specified, the USDA-Forest Service was by far the most frequently mentioned, identified by 44 state foresters.

Other federal agencies, such as the USDI-Bureau of Land Management, the USDI-National Park Service, and the U.S. Environmental Protection Agency, were the second most commonly mentioned group. A relatively small number of states (22 states) acknowledged coordination agreements with state fish and wildlife organizations.

**AGENCY REORGANIZATION**

Nineteen state foresters indicated that resource or environmental agencies had been

**Table 11. Coordination of statewide economic and environmental plans with state forestry programs, by type of economic and environmental plan. 1989.**

Statewide Plan for	States Indicating Coordination with	Degree of Forestry Program Coordination with*
Surface Water Quality	45	2.11
Fish and Wildlife	45	1.67
Outdoor Recreation	45	1.64
Air Quality	39	1.62
Land Use	27	1.52
Groundwater Quality	39	1.51
Statewide Environmental	22	1.50
Economic Development	41	1.49
Population and Growth	20	1.10

\* Key: 3=high, 2=moderate, and 1=low.

**RESOURCE INFORMATION SYSTEMS**

Information management systems are an increasingly popular method of enhancing coordination among and within organizations. Forty-three state foresters indicated that their organizations either maintain or participate in a forest resource information system. Information included in such systems is diverse: statewide forest inventory (included 95 percent of time), forest products production data (70 percent), forest utilization inventory (63 percent), forest soils and erosion data (30 percent), forest wildlife and habitat data (26 percent), forest recreation data (23 percent), and forest road inventories (16 percent).

**Table 12. Frequency of formal interagency agreements entered into by state forestry organizations, by type of program or organization. 1989.**

Organization or Program Type	Number of States*
<b>Federal Agencies</b>	
USDA-Forest Service	44
USDI-Fish and Wildlife Service	5
Other Federal Agencies	26
<b>State Fish and Wildlife</b>	22
<b>Surface Water Quality</b>	14
<b>Local Forestry Agencies</b>	7
<b>Parks and Trails</b>	6
<b>Education and Research</b>	5
<b>Soil Conservation Organizations</b>	4
<b>State and Local Organizations</b>	4
<b>Air Quality</b>	4
<b>Ground Water Quality</b>	3
<b>Minerals</b>	1
<b>Private Conservation Groups</b>	1
<b>Rural Fire Protection Departments</b>	1

\* Each state listed three program areas or organizations.

reorganized in their states within the past ten years. Of those indicating so, the majority (14 states) were of the opinion that reorganization

was only somewhat effective as a means of achieving better coordination of forest policies and programs. One state forester judged reorganization to have been a very effective means of promoting coordination, while four were of the opinion that reorganization was an ineffective tool for doing so.

**INFORMAL COMMUNICATION**

Coordination is not always an activity exclusive to formal administrative mechanisms. In fact, informal communication can be a significant, if not the dominant, means by which organizations coordinate programs and policies in which they have a mutual interest. Examples are agency newsletters, shared staff meetings, and informal discussion amongst the staffs of organizations having a common interest in a policy or program.

Of the 50 state foresters, 44 indicated that informal communication is either the primary means (or a significant component) of coordinating state forest policies and programs. Thirteen of these 44 indicated informal communication to be the primary means of achieving forestry coordination in their state. Only five state foresters (10 percent) indicated that informal communication had little or no influence on program coordination efforts.

**COORDINATING MECHANISMS: CASE EXAMPLES**

The role of coordination in the administration of state forest resource policies and programs can be better understood by reviewing coordinating mechanisms in specific states. Case studies of formal coordinating mechanisms in four states were undertaken. These covered the California State Board of Forestry, Georgia Forestry Commission Board, Florida Forestry Council, and Wisconsin Board of Natural Resources.

Among the criteria used to select the subjects for these case studies were: their coordinating mechanism is perceived as effectively accomplishing objectives as they relate to coordination of forest policies and programs of state governments; the mechanism involves multiple policy areas (e.g., forestry, water quality, environmental policy); the mechanism serves multiple functions (e.g., budget development,

policy development) and involves multiple agency responsibilities; and the mechanism is unique in organization and in responsibilities and has potential to offer experiences that can be applied elsewhere.

**CALIFORNIA STATE BOARD OF FORESTRY**

Established by state law in response to concerns over timber harvesting, the California State Board of Forestry is California's primary mechanism for coordinating the development and implementation of state administered forest policies and programs.

Since its establishment more than 100 years ago, the Board's coordinating responsibilities have

expanded tremendously. It now plays a major policy role in activities such as licensing professional foresters, regulating privately prescribed forestry practices, forestry research coordination, forest resource planning and assessment, urban forestry program development, and general public education on matters concerning forest resources (California State Board of Forestry 1990).

#### MEMBERSHIP

Nine individuals compose the California State Board of Forestry. Three are required to be representatives of the forest products industry and one a representative of the range livestock industry. The other five members represent the public at large, and they cannot represent a particular interest or constituency in California, nor can they have any direct financial interest in the state's timberlands.

The Board's two officers, the chair and vice chair, are appointed by the governor and fellow board members, respectively. All members of the Board are appointed by the Governor to serve for four years, subject to confirmation by the state Senate. The appointments are expected to be based on an individual's educational and professional qualifications as well as on general knowledge of, interest in, and experience with problems relating to watershed management, forest management practices, fish, wildlife and range management, forest economics and land use planning.

The board members' terms are staggered to protect against a one-time complete change in the board's membership. Either two or three new members are appointed in any given year. While no individual term can last longer than four years, board members can be reappointed. Geographic balance among board members is not required by law, nor is it typically a significant consideration when making board member appointments (California Department of Forestry and Fire Protection 1988, California State Board of Forestry 1990, Cromwell 1990).

#### ADMINISTRATION

The California State Board of Forestry carries out its responsibilities via the state's Department of Forestry and Fire Protection (Figure 1). The latter is the state's lead state agency for forestry programs, and its director is responsible for

implementing policies and programs established by the Board.

The Board employs both an executive officer and full-time support staff (Figure 2). Prior to 1977, the director of the Department of Forestry and Fire Protection served as administrator for the Board. As an employee of the Board, the executive officer now serves as the Board's chief administrator and is responsible for overall operation and execution of all Board activities, including the administration of a \$400,000 annual operating budget.

Although no longer having direct administrative responsibility for the Board, the state forester, who is the director of the Department of Forestry and Fire Protection, serves an important liaison function between the Board and the Department. The state forester also attends all Board meetings, serving in an ex officio capacity (Cromwell 1990).

Assisting the executive officer in carrying out Board of Forestry responsibilities is a full-time assistant executive officer, a governmental program analyst, a management services technician, clerical support, and a number of student interns. Though supporting the Board in a variety of capacities, the primary focus of the staff is administration of the Board's fire protection, forest practice, forest assessment, and professional forester licensing responsibilities.

The Board also receives direct staff support from the Department of Forestry and Fire Protection, especially on matters concerning Board regulatory and policy development activities (California Department of Forestry and Fire Protection 1988, Cromwell 1990).

California state law does not require the Board to meet at specified intervals, relying instead on the Board's discretion to determine how often it should convene. On average, the Board meets monthly for two-day sessions, 11 months of the year. Approximately half of its meetings occur at its headquarters in Sacramento, California.

The remaining meetings are held at outstate locations. Because the Board often conducts five to six field trips per year in conjunction with its meetings, outstate meetings are often held at the Department's regional forestry operation centers. State officials indicate that because all state Forestry Board meetings are open to the public, accessibility is a primary consideration in

determining the location of meetings (State of California 1988, Cromwell 1990).

**OPERATION**

The California State Board of Forestry was established to provide policy leadership and to

generate public interest and support on matters considered important to the future of the state's forests and rangelands, especially with regards to their long term sustainability. To accomplish this, the State Board of Forestry is charged with executing the following responsibilities (California Department of Forestry and Fire Protection 1988):

Figure 1. California Department of Forestry and Fire Protection (Source: California Department of Forestry and Fire Protection).

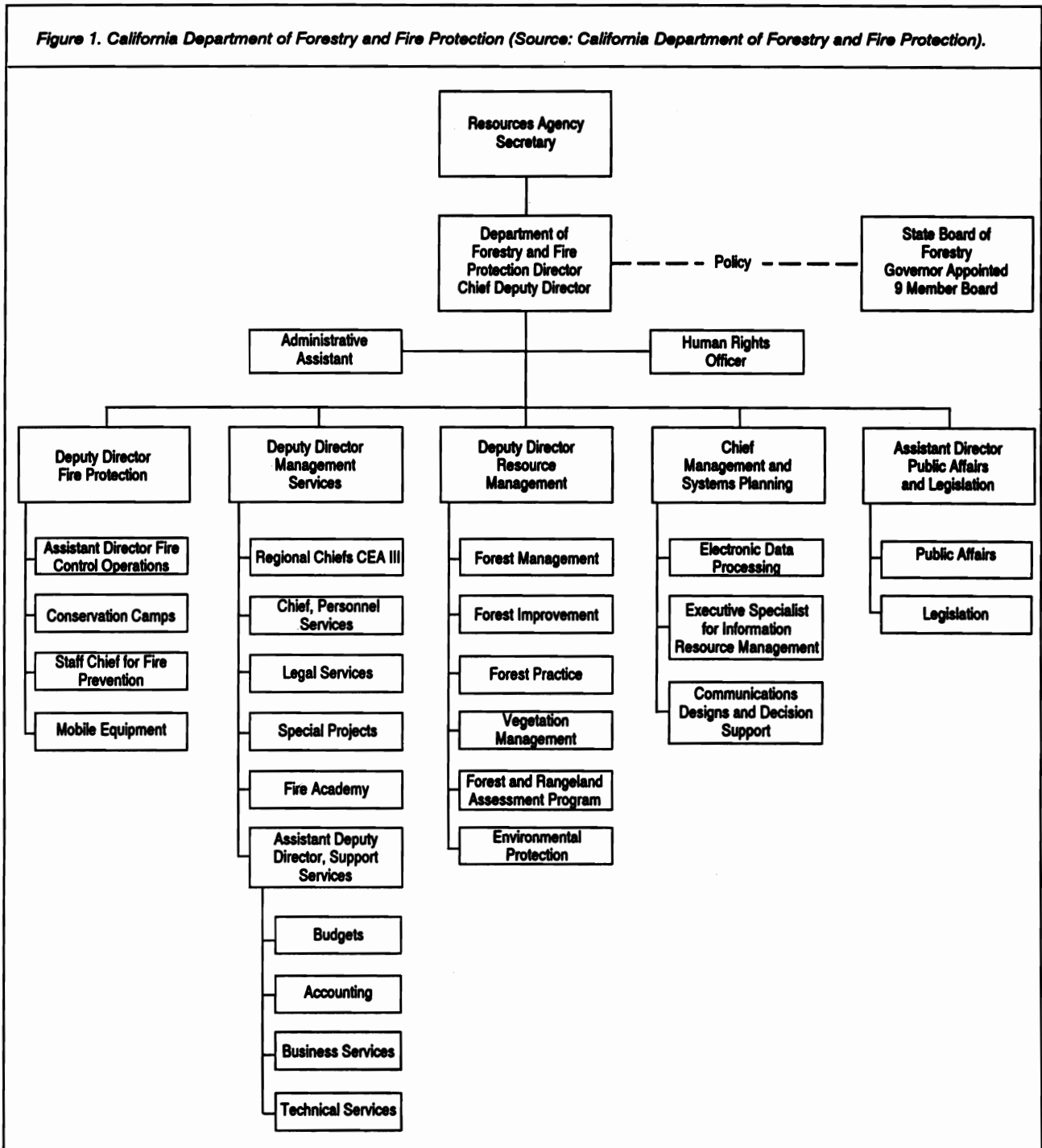
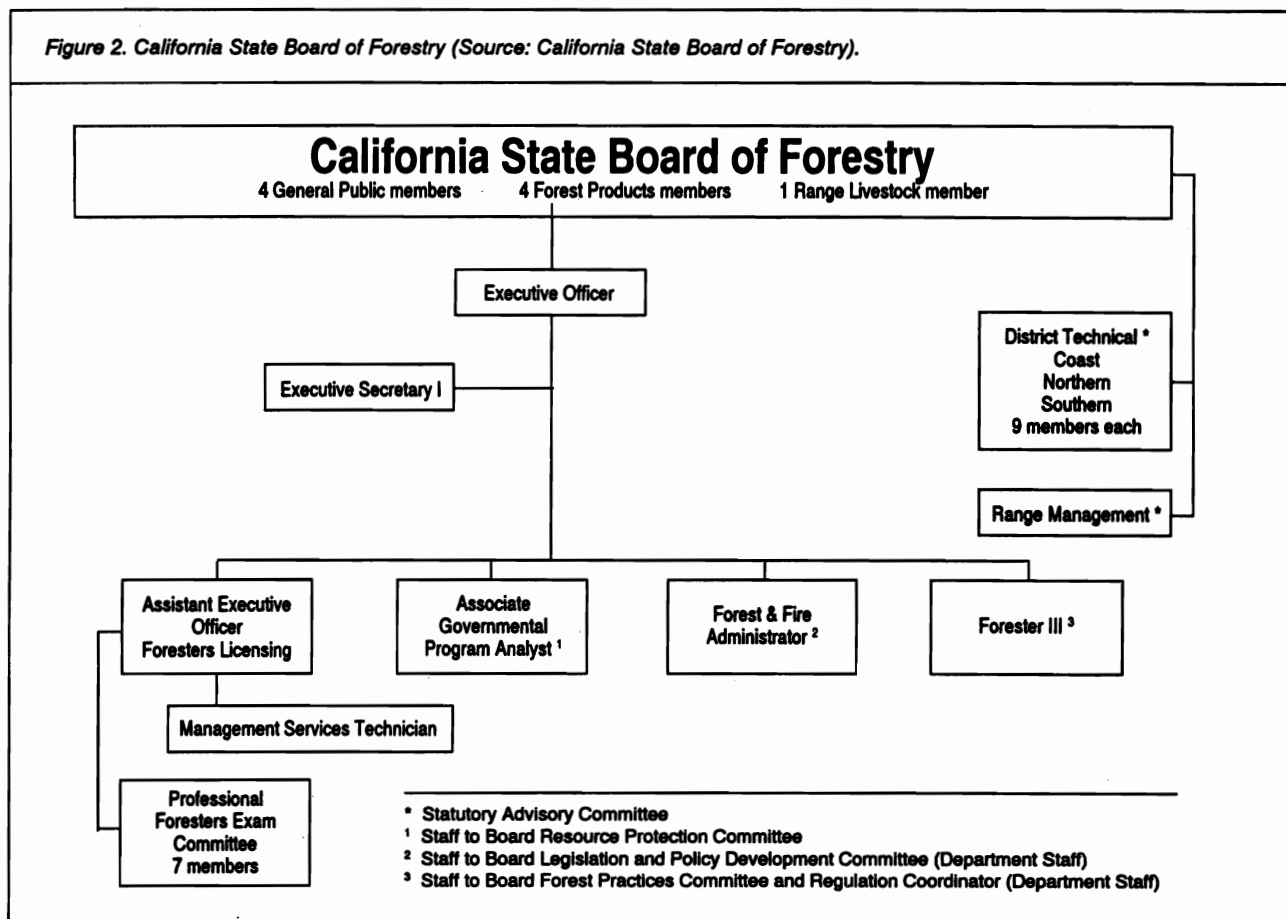


Figure 2. California State Board of Forestry (Source: California State Board of Forestry).



- Represent the state's interest in the acquisition and management of state forests.
- Manage all state interests in federal land matters pertaining to forestry.
- Protect the interests of California's private forest lands.
- Establish and maintain adequate forest policy for the state.

In addition to these broad charges, the Board also has authority over the development of policies that guide management and operation of the Department of Forestry and Fire Protection. This responsibility is exercised over the following Departmental program areas: regulation of private and state forestry practices, licensing of professional foresters, wildfire prevention and control, forest improvement, vegetative management, forest pest and disease control, hardwood management and protection, research planning and evaluation, resource assessment and policy analysis, urban forestry, and public education. For each of these program areas, the Board develops general policies and

guidelines that, in turn, are implemented via specific programs administered by the Department (Paulus 1990, California State Board of Forestry 1990).

The Board of Forestry relies on committees to accomplish its responsibilities. These include three working committees established by the Board and composed of Board members, and five citizen advisory committees established by state law to advise the Board. Committee responsibilities include the licensing of professional foresters, development of statewide wildfire protection policies, promulgation and enforcement of rules concerning forestry practices on privately owned forest lands, development of range management policies, and review and coordination of state interest in proposed forestry and forestry related laws.

Of the five statutory advisory committees, the Board's three district technical advisory committees (coastal, northern, and southern) play an especially important role in coordinating forestry interests important to state government.

Established by state law and charged with presenting coordinated local interests in forestry issues to the California Board of Forestry, each district advisory committee has nine members. The composition mimics the Board's membership (i.e., three from the forestry products industry, one from range and livestock industry and five from the general public). The Board appoints those members after considering each candidate's knowledge of forestry and related natural resource issues. Each Committee is staffed by the Department of Forestry and Fire Protection, and meets approximately six times per year (State of California 1983, Cromwell 1990).

District technical advisory committees often serve as regional forest practice extensions of the California State Board of Forestry. Their insights are often reflected in statewide policies adopted by the Board. For example, advisory committees play an important role in the development of forest practice regulations which ultimately become part of a statewide system of regulations managed by the Board (Henly and Ellefson 1986).

By focusing on regional forest practice interests and concerns, district technical committees provide the Board with unique regional perspectives they might otherwise not receive. Although serving strictly in an advisory capacity, district technical advisory committees can play a key role in developing state forest policy (State of California 1983, Cromwell 1990).

The California State Board of Forestry also plays a major role in setting strategic direction for the use and management of forests within the state. This is accomplished via the Board's periodic development of a policy statement, required by the California Forest and Rangeland Resources Assessment and Policy Act of 1977. The Act requires that the Department of Forestry and Fire Protection periodically assess trends in the condition of the state's forests and rangeland resources, and identify current and potential issues concerning their use and management.

Based on the Department of Forestry and Fire Protection assessment, the Board develops a policy statement that specifies actions needed to address such issues (California Board of Forestry 1990). Via the policy statement, the Board provides a major policy focus for the strategic management of the state's forest resources.

The California State Board of Forestry also serves

important direct and indirect roles in the development and maintenance of state forestry programs. By periodically reviewing selected state forestry programs, the Board carries out active oversight of the effectiveness and efficiency of Department initiatives. The Board also reviews and provides input on all fiscal matters related to state forestry operations, including current and new Department budget initiatives.

One of the Board's more important functions is coordinating, and at times providing support for, forest policies proposed to the state legislature. Although its influence is felt via the review of all forestry related legislative initiatives, the Board's major impact on proposed forestry laws often occurs through informal networking among key policy makers within the state. This networking is not a highly visible activity, but it is a significant means by which the Board influences the nature of laws directed to the use and management of forests (Cromwell 1990).

The California State Board of Forestry also plays an active role in coordinating the activities of other state agencies that have an interest in forest land and range resources. This is especially evident in the area of forestry research, where state law explicitly designates the Board as the lead organization responsible for reviewing and coordinating forestry research within the state.

All state agencies are required to submit to the Board any plans for research dealing with forestry. Once such research is completed, the responsible agencies must report their research results back to the Board (California Department of Forestry and Fire Protection 1988).

#### EFFECTIVENESS

The executive director of the board and the director of the Department of Forestry and Fire protection generally view the State Board of Forestry as a very effective mechanism, both for coordinating the development of state forest policies and for the implementation of forestry programs which result from them. These officials believe this view is shared by a number of other officials that are closely associated with the work of the Board (Table 13).

Despite their fairly high regard for the Board's coordinating activities, state forestry officials are of the opinion that the range of activities

addressed by the Board is not well known to the citizens of California.

Because of its visible role in wildfire suppression, citizens often perceive the Board as exclusively involved in wildfire prevention and suppression. Similarly, even within the Department of Forestry and Fire Protection and certain other state natural resource or environmental agencies, officials are of the opinion that the Board is often mistakenly perceived as only promulgating rules that regulate forestry practices on privately owned timberlands (Cromwell 1990).

years, so has the natural resource responsibilities of other boards, commissions and departments within California state government. In its recent policy statement, the Board of Forestry acknowledges the complex network of public agencies having responsibility for natural resources, including forest resources, within the state. As such, the Board concedes it cannot maintain direct control over all forest resource issues.

Board policy statement also emphasizes that cooperative arrangements and relationships need to be developed and maintained to ensure that common concerns over forest resource management are appropriately addressed. Increased organizational coordination is viewed as playing an even greater future role in managing California's natural resources (California State Board of Forestry 1990).

**Table 13. Effectiveness of coordinating function of California's state board of forestry, as perceived to be viewed by various state officials, organizations and interests. 1989.**

Organizational Affiliation	Degree of Usefulness*
State Legislators	Somewhat Useful
Office of the Governor	Very Useful
State Forestry Officials	Very Useful
Federal Forestry Officials	Very Useful
County Forestry Officials	Limited Usefulness
Forest Industry	Very Useful
Forest Landowner Associations	Somewhat Useful
Conservation Organizations	Somewhat Useful
Environmental Organizations	Limited Usefulness
Other State Agencies	Somewhat Useful
State Board of Forestry Members	Very Useful
State Board of Forestry Staff	Very Useful

\* Perceptions of the Chair, California State Board of Forestry, and Director, Department of Forestry and Fire Protection.

Perceptions by state forestry officials of Board effectiveness in coordinating forest use and management across different ownerships varies considerably. State, private industrial and nonindustrial forests are perceived by state forestry officials as being the most responsive to coordinating efforts of the State Board of Forestry. The Board is thought to have only a moderate degree of influence over forest land administered by the USDA-Forest Service, and a low degree of influence over other federally owned forest land (i.e., USDI-Bureau of Land Management, USDI-National Park Service).

Although the California State Board of Forestry's role and authority over forest and range policy issues has broadened considerably in recent

### GEORGIA FORESTRY COMMISSION BOARD

Development and coordination of state forest policies and programs in Georgia is the responsibility of the Georgia Forestry Commission. With a 1990 contingent of 890 employees and a \$40 million annual operating budget, the Commission manages and protects Georgia's state-owned forest lands; provides rural fire protection throughout the state; encourages proper management of Georgia's private forest lands; and develops and conducts forestry research (Georgia Forestry Commission 1986 and 1989).<sup>1</sup>

Established in 1949 by the Georgia State Legislature, the Forestry Commission represents the culmination of a number of administrative and organizational modifications designed to more effectively manage and protect Georgia's forests.

Forestry management and protection was initially vested in a State Board of Forestry by the 1925 Georgia legislature. Within six years, however, state government reorganization transferred the powers and duties of the board

<sup>1</sup> In 1991, the Governor and General Assembly of Georgia redirected the efforts of the Forest Research and Wood Energy Unit of the Commission. The unit is now identified as the Utilization, Marketing and Economic Development Program.



to the Department of Forestry and Geological Development.

In 1937, state forestry responsibilities were again transferred, this time to a newly created Division of Forestry within the Georgia Department of Natural Resources. Six years later, the Georgia Department of Natural Resources was reorganized into the Division of Conservation, containing a Department of Forestry granted all powers and duties formerly given the Division of Forestry.

The last major change in responsibility for state forest resource management was the 1949 establishment of the Forestry Commission. It assumed all duties of the Department of Forestry. For its first six years, operation of the Commission was overseen by the governor. In 1955, the legislature established a governing board to provide policy direction and coordination for the Commission (Westmoreland 1990, Georgia Forestry Commission 1983).

#### MEMBERSHIP

The governing board of the Georgia Forestry Commission's consists of five persons appointed by the governor, subject to confirmation by the state senate. Members serve seven year terms, and can be reappointed to the Board by the governor under the same procedures used for the initial appointment (Westmoreland 1990). Each year, a chair of the Board is elected by its members.

While Board members are not required by law to represent specific geographic regions of the state, all five members must have an affiliation with forestry. Three of the five are required to be owners (or representatives of owners) of at least 50 acres of forest land within the state. The other two must represent the forest products manufacturing or processing sectors.

Once appointed, all members are required to actively participate in the Board's activities. A member failing to attend three consecutive Board meetings without a valid excuse is removed from the Board by the chair (Georgia Forestry Commission 1983).

#### ADMINISTRATION

In most states, the entity responsible for coordinating state forest policies and programs

is separate from the state forestry organization responsible for carrying out state forest policies. This usually takes the form of an independent board, commission or council providing policy input to the administering forestry agency. Georgia is an exception.

The Board of Commissioners and the Georgia Forestry Commission combine to serve as the coordinating body for developing statewide forest policies, and as the forestry organization responsible for implementing those policies (Figure 3). The Board of Commissioners serves as the coordinating body for the development of statewide forest policies, while implementation of those policies is accomplished by the Commission's director and staff.

Appointed by the Board, the director of the Georgia Forestry Commission serves as executive secretary and administrative officer of the Board and the Commission. By state law, the Commission director, who is also the state forester, must hold at least a Bachelor of Science degree in forestry.

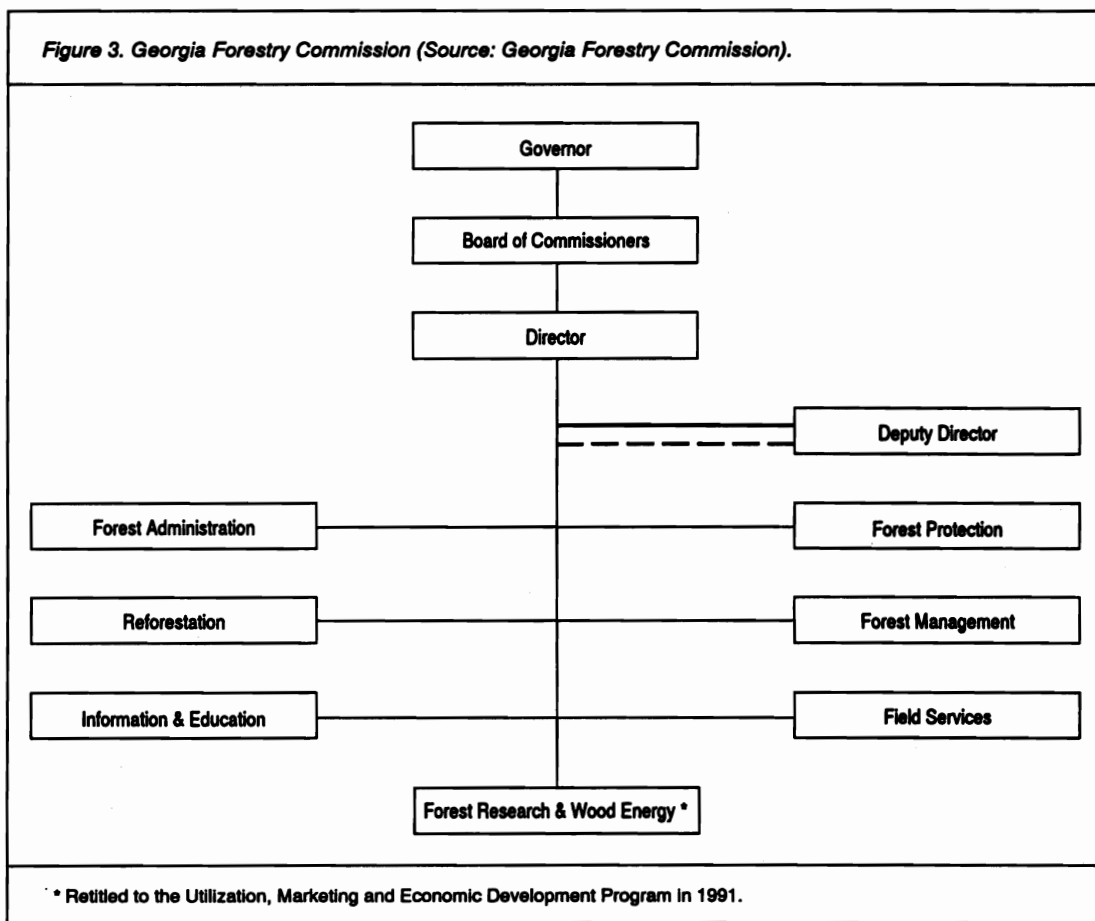
The director's chief function is carrying out the policies and related responsibilities of the Board through the development and implementation of state forestry programs. Thus, the director serves as the liaison between the Board and the staff of the Commission. No other Commission staff are designated to work exclusively with the Board, although the director may request additional staff support when needed.

Funding for the Board is limited. It consists only of board member per diem expenses, which are appropriated through the Commission's travel budget.

State law does not require the Commission's Board to convene at a specified frequency, but the Board usually meets quarterly. The official headquarters of the Commission is in Macon, but Board meetings are frequently held at various locations throughout the state. In fact, the Board often meets at locations where its members can visit state forestry field operations (e.g., tree nurseries) (Westmoreland 1990).

#### OPERATION

The five member board of the Georgia Forestry Commission plays an important leadership role in the state's forestry community. It does so by assuming five primary responsibilities:



- Coordinate state forestry programs among the various organizations involved in forestry within Georgia.
- Develop and manage fiscal resources necessary to carry out policies of the Commission.
- Oversee and evaluate state forestry programs used to implement established policies.
- Conduct long-range and strategic planning activities as related to forestry in Georgia.
- Administer Georgia's forestry laws.

These general responsibilities are articulated through ten major objectives of the Georgia Forestry Commission:

- Promote the state's forest economy by conducting a coordinated forestry program designed to perpetuate and increase forest resources in a manner that is environmentally compatible.
- Provide adequate forest protection for all state and privately owned forest land within

the state.

- Produce and distribute, approximately at cost, sufficient quantities of high quality forest tree seedlings to meet reforestation needs of landowners and others in the state.
- Provide technical assistance to timberland owners in multiple use forest land management and other forest management practices.
- Administer an urban forestry program promoting maintenance and expansion of trees in the urban environment.
- Promote wood as an alternative energy source in the state.
- Provide for applied research related to the growth and utilization of forest products.
- Conduct educational programs in all media areas to promote a better understanding of forest activities, values and benefits received from forests by the citizens of the state.
- Obtain and make available information concerning the state's forest resources.

- Provide services or conduct any function of forest resources as provided by law.

The primary role of the Commission's Board is to coordinate and develop major statewide forest policies (set forth in resolutions). The Board does not typically become involved in routine administrative matters. Exceptions are, for example, the sale of state-owned forest land which the Board must approve.

The Commission's Board does not become involved in the detailed development of state forestry budgets, delegating to the director both that responsibility and its coordination with the executive branch. Budgets proposed by the director must, however, be approved by the Board.

Because Georgia's Department of Natural Resources has a separate governing board, the Commission does not assume responsibility for coordination of other natural resource policies and programs (e.g., fisheries, wildlife, parks, recreation) unless such policies and programs are directly related to forestry (Westmoreland 1990, Council of State Governments 1988).

To better achieve its forestry objectives, the Georgia Forestry Commission has created a number of committees and councils advisory to either the Board or its director. While many in number, the principal councils and committees that provide direction and coordination on specific forestry issues are the Georgia Forestry Development Committee, the Georgia Forest Research Council, and the Urban Forestry Council.

The Georgia Forestry Development Committee was established by the Commission's director to assist the Commission in identifying emerging forestry issues and to review the operation of Commission forestry programs. This 22 person committee represents a broad cross section of Georgia forestry interests, including public and private organizations that have interest in the state's forest policies and programs (Westmoreland 1990).

The Committee serves two especially important purposes. It serves as a forum from which forestry interests can discuss the implementation of existing forestry programs, proposals for new forestry laws, and major social and environmental issues of potential concern to the state's forestry community. It also secures (via committee members) support for current or

proposed forest policies and programs. In the context of securing support, an outreach network has been developed by which local policy makers and other key interests are informed of Commission activities, and by which expanded support is secured for such activities (Westmoreland 1990).

The Georgia Forestry Research Council was established by the state legislature in 1978. The Council serves as an advisory body to the Commission on the broad matters relating to forestry research, especially as they pertain to the Commission's research mandate to conduct, coordinate and promote forestry research; and to designate forestry research responsibilities to specific organizations.

The Forestry Research Council has seven members appointed by the Governor and confirmed by the state Senate. Members serve terms ranging from one to seven years. State law requires the Council to meet with the director of the Commission twice annually (Georgia Forestry Commission 1983).

In concert with the Commission's urban forestry program (established in 1967), the Georgia Forestry Commission created the Urban Forestry Council to promote the health of Georgia's urban forests (Georgia Forestry Commission 1986, 1989).

The Council uses techniques such as policy development, education, and technical support to promote and improve the quality of life in the state's urban areas. Council activities have included sponsorship of urban forestry conferences; awards to individuals, organizations and communities for work in urban forestry; assistance to local governments in establishing tree protection and land development ordinances; and certifying and providing continuing education of urban foresters and arborists.

#### EFFECTIVENESS

Both the Chair of the Commission's Board and the Commission's Director say that the governing board of the Georgia Forestry Commission is a very effective means of coordinating the development and implementation of state initiated forest policies and programs. When asked if modifications were needed in the way the Board or the Commission is currently structured or in the

nature of the duties they perform, these officials were of the opinion that changes were not necessary.

As perceived by the Board's Chair and the Commission's Director, most other individuals or organizations within the Georgia forestry community also have a very positive attitude toward the Board's activities (Table 14). The governor, legislature and other state forestry officials were perceived as viewing the Board to be very effective in accomplishing stated objectives.

**Table 14. Effectiveness of coordinating function of the Georgia forestry commission board, as perceived to be viewed by various state officials, organizations and interests. 1989.**

Organizational Affiliation	Degree of Usefulness*
State Legislators	Very Useful
Office of the Governor	Very Useful
State Forestry Officials	Very Useful
Federal Forestry Officials	Somewhat Useful
County Forestry Officials	Very Useful
Forest Industry	Somewhat Useful
Forest Landowner Associations	Somewhat Useful
Conservation Organizations	Somewhat Useful
Environmental Organizations	Limited Usefulness
Other State Agencies	Somewhat Useful

\* Perceptions of Chair, Georgia Forestry Commission Board, and Director, Georgia Forestry Commission.

Only environmental organizations were perceived as viewing the Board to be of limited usefulness, possibly due to their lack of representation on the Board. While the governing Board of the Commission is well known within the state's forestry community, it is relatively unknown to the general public (Westmoreland 1990).

In terms of the effectiveness of the Commission's Board in coordinating forest policies and programs emanating from various forest landowners, the Chair of the Commission's Board and the Director of the Commission view the Board as having considerable coordinating influence over most forest ownerships. The actions of the Commission are specifically perceived to have a high degree of coordinating influence over state,

county and private nonindustrial forests (forest ownerships to which the Commission's policies are often targeted).

The same officials view the Board as having only moderate coordinating influence over forest land that is owned and managed by the federal government (i.e., USDA-Forest Service) and by the state's wood-based industries.

### FLORIDA FORESTRY COUNCIL

The Florida Forestry Council was established in 1969. It has major responsibility for coordinating Florida's forest policies and programs.

Prior to 1969, forest policy and program coordination was the responsibility of the Florida Board of Forestry, a coordinating entity that consisted of five governor-appointed members. Its major charge was to develop statewide policies for forestry. Policies and programs established by the Board were carried out by the state forester. Since the latter was an employee of the Board, the Board had direct authority over operation of all state forestry activities (Mikell 1990).

In 1969, the Florida electorate endorsed a new constitution that significantly changed the organization of state government. These changes included the administrative structure governing the development and implementation of state forest policies and programs.

In the process of consolidating and restructuring, considerable debate emerged over the appropriate administrative location for the state's forestry programs. A resulting compromise created a new Division of Forestry within the Department of Agriculture and Consumer Services (latter being administered by one of seven elected, cabinet-level positions) (Mikell 1990).

All policy making authority within the Department, including that of the Division of Forestry, was transferred to the Commissioner of Agriculture, eliminating need for the Florida Board of Forestry. However, with general agreement that communication and coordination between the Division and the state's forestry interests was important, in 1969 the Legislature created the Florida Forestry Council. The Council does not have the former Board of Forestry's policy making authority.

Instead, its mission is to provide advice and counsel to the Division (Florida Statutes 1989, Mikell 1990).

#### MEMBERSHIP

The Florida Forestry Council has five members, each representing a specific forestry interests within the state. By law, the Council must include one member from each of the following: pulp and paper manufacturing industry, forest products industry, timber or timber products dealer, an individual forest landowner, and a statewide conservation organization whose interests lie in conservation and development of Florida's forest resources.

Florida's Commissioner of Agriculture oversees administration of the state's Division of Forestry, and appoints Council members. When a Council vacancy occurs, the Commissioner appoints a new council member based on nominations submitted by any statewide organization whose interests include forestry. State law requires the Commissioner to consider at least two, but no more than three, nominations to each Council seat. Geographical representation is not required, but Council officials indicate that consideration is given to that factor.

Council member terms are four years, with no limit on the number of times a member can be reappointed. State forestry officials indicate that most Council members are reappointed to several consecutive terms. In fact, one member has served on the Forestry Council since its inception 21 years ago (Florida Statutes 1989, Mikell 1990).

#### ADMINISTRATION

The Florida Forestry Council is one of 22 advisory councils to the Department of Agriculture and Consumer Services (Figure 4). Organizationally, each of these councils is a separate advisory body that provides input to a specific program area within the Department. Although the Forestry Council technically interacts through the Commissioner's office, advice on state forestry matters is typically focused directly on the Division of Forestry.

State law requires the Florida Forestry Council to meet annually. This meeting occurs on the first Monday in October, at which time council members elect a chair, vice chair and secretary for the coming year. In practice, however, the

Council typically meets three to four times per year.

All Council meetings, in addition to the annual October meeting, are classified "special" and can be called at any time by the Council chair or upon written request by the majority of its members. While the official headquarters for the Florida Forestry Council is Tallahassee, the Council can choose to meet anywhere within the state. The Director of the Division of Forestry (state forester), in consultation with the Council chair, is responsible for establishing all meeting agendas. Proceedings of all meetings are maintained as public record by the Division of Forestry (Florida Statutes 1989, Mikell 1990).

The Forestry Council does not have a separate budget to support its activities. All direct expenses associated with Council activities are appropriated from the Division of Forestry's annual operating budget (e.g., indirect expenses for special studies and reports, per diem and travel expenses for Council members up to a legislatively established maximum of \$2,500 per year per member, and indirect expenses).

The Council does not have a permanent staff. It relies on the Division Director to serve as liaison between the Council and the Division of Forestry. On an ad hoc basis, additional Division of Forestry staff may be requested by the Director to provide assistance to the Forestry Council (Florida Statutes 1989, Mikell 1990).

#### OPERATION

The Florida Forestry Council was established to coordinate policy and program advice to the Department of Agriculture and Consumer Service's Forestry Division from various interests within Florida's forestry community. There are three specific components to its legislatively mandated mission:

- Advise, counsel and consult with the Department of Agriculture and Consumer Services, and with the director of the Forestry Division, on the promulgation, administration and enforcement of its laws and rules relating to forestry.
- Consider all matters submitted to it by the Department of Agriculture or the Division of Forestry.
- Offer suggestions and recommendations to the Department or to the Division of Forestry relating to changes in forestry laws or rules to

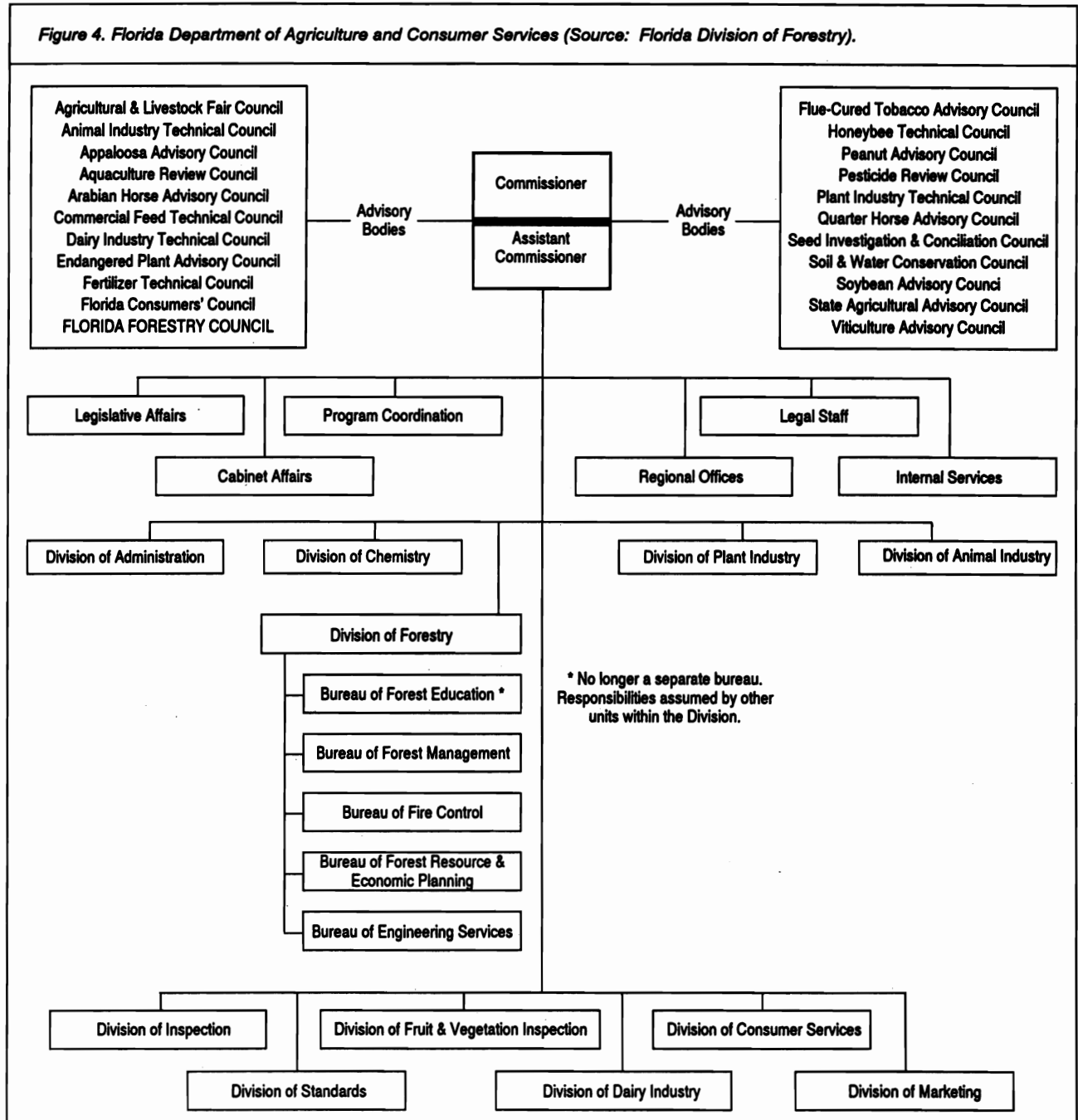
enhance their administrative or enforcement effectiveness.

In addition to these primary responsibilities, the Council can be asked, by the Department or the Division of Forestry, to examine specific issues that affect the management or use of the state's forest resources (Florida Statutes 1989).

The Forestry Council is not involved with the

coordination of legislative proposals or with the coordination of Division's programs within or between departments. Such coordinating functions are deferred to the Department of Agriculture and Consumer Affairs or to the Division of Forestry. Similarly, the Council typically does not become involved in coordinating policies to address natural resource issues that encompass other disciplines (e.g., fisheries and wildlife management, parks and

Figure 4. Florida Department of Agriculture and Consumer Services (Source: Florida Division of Forestry).



recreation), except when an issue directly impacts forest resource management within the state. The Council also refrains from monitoring or evaluating day-to-day operation of the Division's programs.

Only when a policy or program of the Department or the Division becomes particularly visible or controversial does the Forestry Council play an active role in providing advice to the Department (Mikell 1990).

Minutes of recent Florida Forestry Council meetings indicate that the focus of the Council's activities is, indeed, on Division of Forestry policies and programs, and that the Council does serve primarily in an advisory capacity. Within this context, however, issues appearing on the Council's agenda vary tremendously.

The Council plays an active role in discussing broad Division policies, and in reviewing and providing input to the Division on proposed legislation and forestry budgets. The Forestry Council also takes an active role in advising the Division on very specific issues such as types and prices of seedlings produced at the state owned tree nurseries; user fees for various activities on state forest lands; and Departmental use and management of specific capital equipment for forest management purposes (Florida Forestry Council 1988 and 1989).

**EFFECTIVENESS**

Florida's Forestry Council is generally perceived as an extremely effective mechanism for developing and implementing forestry programs and policies (Table 15). Forestry Division leadership expresses the opinion that if given the opportunity to change either the membership of the Council or its major functions and duties, no changes would be made.

The high level of regard for the Florida Forestry Council is held not only by the state's forestry officials, but is also perceived by those same officials as being the opinion of the state's major forestry interests. However, as is often the case with many formal coordinating mechanisms for state forestry, environmental organizations are viewed as seeing only limited usefulness for the Council in coordinating the forest policies and programs of state government.

Unsurprisingly, officials within the state's Division of Forestry perceive the Council's

**Table 15. Effectiveness of coordinating function of florida's forestry council, as perceived to be viewed by various state officials, organizations and interests. 1989.**

<b>Organizational Affiliation</b>	<b>Degree of Usefulness*</b>
State Legislators	Unknown
Office of the Governor	Unknown
State Forestry Officials	Very Useful
Federal Forestry Officials	Unknown
County Forestry Officials	Unknown
Forest Industry	Very Useful
Forest Landowner Associations	Very Useful
Conservation Organizations	Somewhat Useful
Environmental Organizations	Limited Usefulness
Other State Agencies	Unknown
Forestry Council Members	Very Useful
Forestry Council Staff	Very Useful

\* Perceptions of leadership with the Florida Division of Forestry.

greatest coordinating influence to be over forest land that is owned and managed by the Division. Those officials believe the Council's actions impact the management and use of nonindustrial private forest lands to only a moderate degree. They see the Council as having virtually no impact on other forest ownerships (e.g., National Forests, and county and municipal forests).

**WISCONSIN NATURAL RESOURCES BOARD**

Coordination of state forest resource policies in Wisconsin is accomplished via the state's Natural Resources Board. Unlike most formal state forestry coordinating entities whose primary, if not exclusive, focus is state forestry matters, the Wisconsin Natural Resources Board serves as the policy coordinator for a number of resource and environmental areas in addition to forestry.

In response to recommendations of an independent study commission regarding the organization of state government, the Board was established in 1967. As a state coordinating entity, the Board plays an important role in developing environmental protection and natural resource management policies for the state of Wisconsin (Christenson 1990, Wisconsin Statutes 1988).

### MEMBERSHIP

The Wisconsin Natural Resources Board has seven citizen members, none of which formally represent a particular interest or constituency. All members are appointed by the Governor for six year terms, with the advice and consent of the state Senate. Members are usually selected because of their knowledge of state environmental or natural resource issues, or because of their affiliation with a particular resource related organization that has an interest in such issues.

To avoid wholesale turnover of the Board's membership in any given year, member terms are staggered, with either two or three members appointed every odd year. At its first meeting of each calendar year, the Board elects a chair, vice-chair and a Board secretary (Wisconsin Department of Natural Resources 1989, Wisconsin Statutes 1988, Christenson 1990).

State law requires that at least three members of the Board represent the northern part of the state, and three members represent southern Wisconsin. The remaining Board member is appointed from the state at large.

While there are no additional prerequisites for appointment to the Board, appointments are limited to citizens who are not holders of permits (e.g., water appropriation, pollution discharge) issued by the Department of Natural Resources. Persons who have within the past two years received a significant portion of their income, either directly or indirectly, from a Department permit holder or an applicant for such permits are also not eligible for appointment to the Board. Members are not compensated for serving on the Board, except for necessary travel expenses (Christenson 1990, Wisconsin Statutes 1988).

### ADMINISTRATION

The Natural Resources Board is the coordinating arm for the development of state environmental and natural resources policies in Wisconsin (Figure 5). As such, it is charged with providing direction to and supervision over the Wisconsin Department of Natural Resources, the state organization responsible for implementing all Board policies. Nearly all state environmental and natural resource planning, management and regulatory functions are incorporated within the Department's four divisions (Figure 5).

The Secretary of the Wisconsin Department of Natural Resources (chief Departmental Administrator; *not* the Natural Resources Board secretary) serves as liaison between the Natural Resources Board and the Department. Appointed by the Board, the Secretary is granted all administrative powers necessary to implement Board policies. The Secretary is also responsible for representing the Department in its relations with all other individuals or organizations, whether they be private, substate, state or federal agencies.

The Secretary functions as the head of the Natural Resources Department between Board meetings, but without the Board's authority to develop administrative rules regarding the operation of its natural resource and environmental programs (Wisconsin Department of Natural Resources 1989). The Board does not employ a staff, instead relying on the Department to keep complete records of Board meetings and provide staff support for special reports or studies (Christenson 1990).

The Natural Resources Board generally meets once per month. While the official headquarters of the Natural Resources Board is Madison, the Board regularly holds meetings in outstate Wisconsin. In addition to monthly meetings, special meetings can be called by the chair of the Board or by at least three of its members (Wisconsin Department of Natural Resources 1989). The agenda for Board meetings is established by the Secretary in consultation with the chair of the Board. All meetings are conducted according to Robert's Rules of Order and in compliance with Wisconsin's open meeting laws (Wisconsin Statutes 1988).

### OPERATION

The Wisconsin Natural Resources Board has broad powers and responsibilities for the management and use of the state's natural resources. Because of the extensive powers and responsibilities, the Board organizes itself into three principal committees, namely:

- *Committee of the Whole*—Addresses the use and management of natural and environmental resources generally. For example, review and approval of Department budgets, and review of natural resource or environmental issues that are of special statewide significance.



- **Resource Management-Business Committee**—Responsible for programs involving state natural resource management. For example, forestry, fisheries, wildlife, parks, recreation and related resource topics.
- **Environmental Quality-Enforcement Committee**—Responsible for environmental protection programs. For example, air and water pollution control, solid and hazardous waste disposal, shoreland and floodplain zoning, water supply and distribution, and water resource planning.

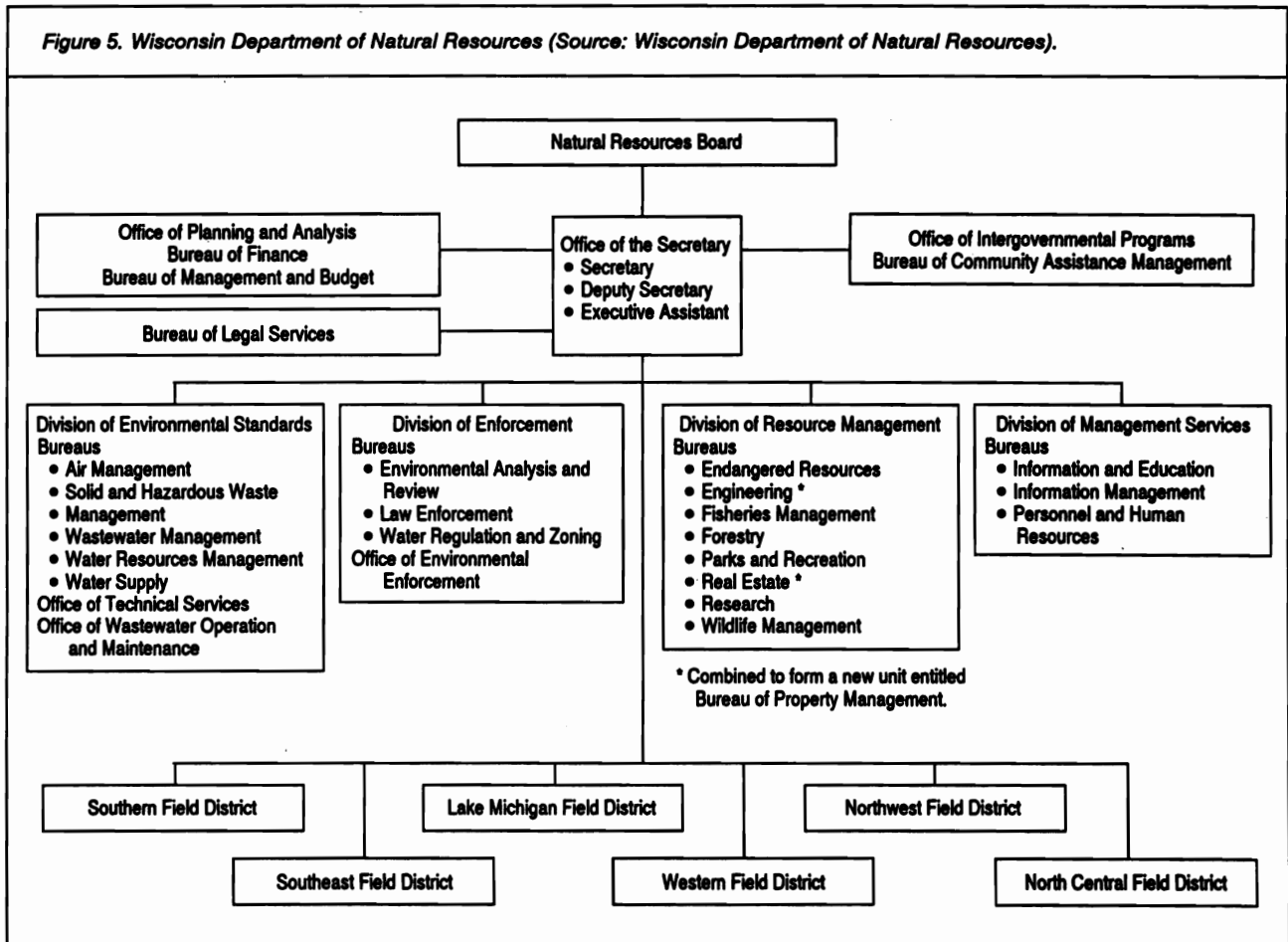
Committee appointments and selection of committee chairs is the responsibility of the chair of the Natural Resources Board. Committee appointments last one year and are made at the Board's second regularly scheduled meeting of the year. With the exception of the Chair, all Board members are assigned to either the resources or the environmental committees.

In addition to the Board's standing committees,

the Chair of the Board can appoint special ad hoc committees to address important issues or problems that cannot be handled by existing committees (Wisconsin Department of Natural Resources 1989).

The Wisconsin Natural Resources Board typically adopts natural resource and environmental policies via administrative rule making procedures (Christenson 1990). In general, the Board does not become actively involved in the initial stages of any proposed rule change; much of this responsibility is delegated to one of the Board's committees. While the actions of the latter are unofficial and without authority, rules governing the Natural Resources Board allow such committees to conduct meetings and public hearings on the proposed rule changes.

The intent of empowering committees in the initial stages of a proposed rule change is to encourage interested parties to attend the public



hearings and to provide comments at an appropriate time in the rule making process. Only after rules are ready for final adoption will the Natural Resources Board become actively involved in a proposed rule change.

Beyond developing statewide environmental and natural resource policies, the Natural Resources Board serves a number of other important roles. For example, the Board facilitates development of Department of Natural Resource's budgets. While responsibility for preparing such budgets falls to the Department, the Board must give the budget final approval. The Natural Resources Board does not, however, take an active role in lobbying for approval of Departmental budgets (Christenson 1990).

positions and resolutions adopted by the Board (Christenson 1990).

**EFFECTIVENESS**

Wisconsin state forestry officials indicate that the Natural Resources Board is very visible and well known by Wisconsin citizens. Additionally, many of the state's private environmental and natural resource organizations are viewed as being supportive of the Board because of the citizen nature of its membership and because the terms of its members extend beyond the terms of those who appoint them.

Though the Board has broad responsibility for state natural resources and environmental policy development, the state's Director of the Bureau of Forestry perceives the Board to be a very effective mechanism for coordinating the development and implementation of state forest policies, and suggests that no organizational changes are needed.

In the Bureau of Forestry Director's and other forestry officials' perceptions of how others view the forestry coordinating effectiveness of the Board, most individuals or organizations impacted by the Board's actions are viewed as believing the Board is at least somewhat useful in acting as a coordinator of state forestry policies and programs (Table 16). County forestry officials, the state's forest industry, forest landowners, and environmental organizations and state agencies not directly involved in forestry activities are judged as seeing the Board's usefulness in coordinating forestry matters as limited.

The Bureau Director and related state agency officials perceive the Board as having significant coordinating influence on the management of forest land owned by the state of Wisconsin. Through its strong policy development role for state administered programs and activities, the Board is thought to exert a high degree of influence over the use and management of state administered forest lands.

The Board is perceived to have only a moderate degree of influence over forest management activities occurring on county forest lands and on all categories of private forest ownerships (industrial and nonindustrial). Common to most state coordinating entities, the Board's influence on federally owned forest land is considered to be quite low.

**Table 16. Effectiveness of the coordinating function of the Wisconsin natural resources board, as perceived to be viewed by various state officials, organizations and interests. 1989.**

<b>Organizational Affiliation</b>	<b>Degree of Usefulness*</b>
State Legislators	Somewhat Useful
Office of the Governor	Somewhat Useful
State Forestry Officials	Somewhat Useful
Federal Forestry Officials	Somewhat Useful
County Forestry Officials	Limited Usefulness
Forest Industry	Limited Usefulness
Forest Landowner Associations	Limited Usefulness
Conservation Organizations	Somewhat Useful
Environmental Organizations	Limited Usefulness
Other State Agencies	Limited Usefulness
Natural Resources Board Members	Somewhat Useful
Natural Resources Board Staff	Somewhat Useful

\* Perceptions of leadership within the Wisconsin Bureau of Forestry.

The Wisconsin Natural Resources Board also reviews implementation of Department programs. While refraining from involvement in reviews of day-to-day program operations, the Board regularly oversees program compliance with administrative rules previously adopted by the Board. The Board also plays an important role in federal, regional and local natural resource and environmental issues of importance to the state. While not able to exert the level of influence afforded to state issues, the Board attempts to persuade interested parties to adopt certain policies via

## SUMMARY AND RECOMMENDATIONS

### ORGANIZATIONAL AND ADMINISTRATION CONTEXT

While many variables affect the coordination of policies and programs within and between organizations, probably none are more influential than an organization's administrative attributes (e.g., organization structure, program responsibilities, available resources, clients served). Such characteristics not only have a major influence on the need for coordination, but also have great influence on the manner in which coordination occurs and its ultimate effectiveness. There is considerable diversity among lead forestry organizations of state government in the context of policy and program coordination.

**Size and Budget.** Lead forestry organizations of state governments range in size from 17 employees with an \$800,000 annual operating budget to over 3,650 employees with an annual operating budget in excess of \$400 million (Fagunes 1990). On average, state forestry organizations employ 354 people and are supported with an annual operating budget of approximately \$20 million.

**Range of Programs.** Forestry programs (e.g., road programs, wildlife programs, urban forestry programs) administered by a state's lead forestry organization ranges from five to 18, with an average of 12 per forestry organization.

**Overlapping Responsibility.** Lead forestry organizations of nearly all state governments share responsibility for managing state forest resources with other public organizations. On average, four public organizations in each state have management and planning responsibility for forestry. While the lead forestry agency is the sole public organization with forestry responsibilities in four states, one state has ten different government organizations implementing major programs involving forest resource planning and management.

**Non-traditional Activities.** Lead forestry organizations of state governments are often also responsible for administering programs not typically identified with traditional forest planning and management activities (e.g., economic development programs). Two-thirds of all lead state forestry agencies have established such programs.

While no state is completely absent of coordination among its forestry programs and organizations, the intensity with which coordination occurs within state government varies considerably among states. Furthermore, states have developed a variety of methods by which to encourage coordination.

- Forest policies and programs of state governments are either moderately or closely coordinated with other organizations in nine of every ten states.
- In states in which coordination of forestry programs occurs, nine of ten achieve coordination objectives via informal staff communication and temporary task forces.
- In states in which coordination of forestry programs occurs, three-quarters also achieve coordination objectives via formalized mechanisms such as boards, commissions and councils.
- Although infrequently used, reorganization and consolidation are perceived by states as having limited effectiveness for improving the coordination of forest policies and programs.
- Obstacles to successful coordination of forest policies and programs by state governments are many, of which the lack of adequate information on program and resource trends is a major one.
- Poor communication is always viewed as an obstacle to effective coordination. Lack of communication *within* an organization is viewed as a more significant barrier than is the inability of different (*between*) organizations to communicate with one another.
- States distinguish between *coordination of program implementation* (coordination required to effectively deliver specific services or programs), and *coordination of policy development* (coordination of different organizations [public and private] having an interest in the development of state forest policies). States tend to develop different strategies and tactics for these coordination needs.

State government experiences with the coordination of forestry activities generally represents a rich source of information from which can be drawn a number of observations and recommendations. The latter can be useful

to individual states as they seek to better achieve their interests in the coordination of statewide forest policies and programs.

## **COORDINATION OF POLICY DEVELOPMENT**

### **STATUS AND EFFECTIVENESS**

In contrast to coordination of policy and program implementation, where focus is on delivery of specific services, coordination of policy development focuses on organizing advice and information deemed necessary for the establishment of forest resource policies. Also in contrast to coordination of program implementation, which often involves numerous mechanisms for linking common agency interests, nearly all coordination of forest policy development, where such occurs, employs the single approach of a formal coordinating mechanism (e.g., board, commission, council).

Thirty-one states have formal coordinating mechanisms for policy development. As might be expected, the specific nature of such mechanisms varies considerably in form and function.

**Membership.** Formal coordinating mechanisms average 11 members, although some have as few as five while others have as many as 30. More than half of all formal forestry coordinating mechanisms have ten or fewer members.

**Interest Representation.** In all but two states, members are appointed to serve on formal coordinating mechanisms. Terms vary from two to nine years, the average being four years.

Only one state's formal coordinating mechanism is composed entirely of citizen members. A state's forest products industry is most frequently represented group (present on 58 percent of all formal coordinating mechanisms). Environmental, sporting and conservation groups generally have only modest representation.

State foresters are generally satisfied with the membership composition of formal forestry coordinating mechanisms. Some suggest membership should be broadened to include other interests in a state's forest resources.

**Function.** Coordination of the development of

state forest policies is the most common function of formal coordinating mechanisms. Other responsibilities include providing a forum for oversight and evaluation of existing forestry programs, developing strategic directions for state forestry activities, and serving as a vehicle by which information flows among state forestry officials is facilitated.

**Accountability.** Formal coordinating mechanisms are typically accountable to either the legislature (three out of ten states), governor (two out of ten) or the head of a forestry or natural resource agency (four out of ten). The formal coordinating mechanisms in four states are not accountable to any particular entity or organization.

Effectiveness of formal coordinating mechanisms used for policy development purposes depends on a number of factors including: the visibility of forestry activities within a state, the power vested in the formal coordinating mechanism, organizational structure of state government, and specific state needs for coordination of policy development.

Although nine of 10 state foresters involved with a formal coordinating mechanism view their formal mechanism as effective, such a general affirmation masks the many reasons for such effectiveness. For example, those formal coordinating mechanisms legitimized specifically by state law are viewed as more effective than those created by informal agreements among forestry leaders in a state. All but two of the 18 formal coordinating mechanisms created by action of a state legislature have authority for development of statewide forest policies. However, when formal coordinating mechanisms are established by informal agreement, only two of the seven such entities identified have policy making authority.

The means by which formal coordinating bodies are empowered for policy development is also critical to their effectiveness. In most states, the ability to develop policy occurs through the promulgation of administrative rules. Those formal coordinating bodies that have such power are usually perceived to be more effective than those that lack such authority. When policy development occurs through formal coordinating mechanisms that lack any means of legitimizing their decisions, adherence to agreed upon policy decisions occurs only to the extent that individuals represented on the formal coordinating mechanism are willing to

comply with such decisions.

State foresters perceive that natural resource managers and administrators regard coordination of forest policy development as the most useful and important role of formal coordinating mechanisms. Environmental organizations, however, are perceived by state foresters as viewing such policy coordinating mechanisms as being of limited use to the accomplishment of objectives espoused by environmental organizations.

From a forest land ownership perspective, state owned forests are perceived by state foresters as being the forest land ownership category most heavily influenced by the actions of formal coordinating mechanisms; federally administered forest land is viewed as the least affected.

## RECOMMENDATIONS

Mechanisms for the coordination of policy development should acknowledge and, where applicable, incorporate clear definitions of coordination needs, recognition of interests to be affected by policy development, definitions of authority of the coordinating mechanism, and definitions of the coordinating mechanism's interface with other government organizations responsible for policy coordination.

**Clearly define coordination needs.** State governments have diverse reasons for coordinating the development of forest and related natural resource policies. Failure to link diverse coordination needs to an appropriate coordinating mechanism can severely diminish the ability of a particular mechanism to achieve desired objectives. Such is especially critical with regard to the coordination of existing versus proposed policies.

With existing policies, coordinating mechanisms should be composed of high-level administrators of responsible agencies. With proposed new policies, such mechanisms should reflect the many interests that could be affected by the policy (e.g., industrial, environmental, government).

**Recognize interests to be affected by policy development.** Natural resource and environmental policies can impact a number of individuals and organizations. The concerns and interests of such individuals and groups should

be explicitly acknowledged by the structure of a formal coordinating mechanism. Further, such mechanisms should acknowledge the variable influence its policy actions can have on individuals and organizations (e.g., different forest land owner categories). Failure to do so will deter from the mechanism's effectiveness.

### **Define authority of coordinating mechanism.**

Improving coordination of policy development via formal mechanisms should clearly define the appropriate level of authority needed by such mechanisms in order to accomplish their objectives. For example, those mechanisms whose primary purpose is to provide overall coordination of existing policies typically do not require a great deal of empowerment; their primary focus is to provide a forum from which to exchange information.

Where substantial authority is necessary in order for formal mechanisms to be effective, such authority should be legitimized by state law and should probably include rule-making as the primary means of empowerment.

### **Define coordinating mechanism's interface other government organizations responsible for policy coordination.**

State governments employ a variety of coordinating mechanisms and processes that either directly or indirectly affect the development of forest resource policies. The establishment of additional mechanisms to improve the coordination of forest policy development should be compatible with and strengthen existing coordinating bodies.

## COORDINATION OF PROGRAM IMPLEMENTATION

### STATUS AND EFFECTIVENESS

Coordination required to implement specific programs or to deliver specific forestry services is viewed by state forestry officials as the type of coordination that demands the greatest involvement of individuals directly associated with or responsible for a particular program or service. Because the results of program implementation are typically more direct and tangible than the results of policy development, the exact timing of coordinated efforts is also of critical importance.

Generally, state perception of the need for program coordination, as well as the actual

occurrence of program coordination, varies considerably according to the nature of the forestry programs being implemented. Without exception, the level of actual coordination occurring within or between a forestry program is less than the state perceived need for such coordination.

The effectiveness of various techniques used to coordinate program implementation varies considerably among states. Certain approaches, however, are more effective than others. For example, informal communication links developed among staff of different organizations is perceived as not only the most common means of encouraging coordination of program implementation, but overall, the most effective technique. Although less so, written interagency agreements and resource information systems are also viewed as effective mechanisms for coordinating the implementation of programs.

State foresters suggest that statewide forest planning programs are only modestly effective as a means of coordinating the latter. While every state coordinates programs, to some degree, with other nonforestry statewide planning programs, the actual level at which such coordination occurs is fairly modest. Similarly, reorganization of state government is seen as having but limited success in enhancing the coordinated implementation of forestry, natural resource, and environmental programs.

## RECOMMENDATIONS

Mechanisms for coordinating policy and program implementation should acknowledge and, where applicable, emphasize informal communication, focus coordination at the task level, use written agreements, identify and monitor program trends in related organizations, maintain broadly linked resource information data bases, and review agency administrative structures.

**Emphasize informal communication.** Informal communication links between staff of affected organizations should be encouraged as a major means of coordinating the implementation of programs (e.g., joint temporary task forces, joint staff meetings, news letters). Although more structured mechanisms can be employed to coordinate program implementation, their usefulness is typically limited to specific and unique administrative circumstances.

**Focus coordination at the task level.** Activities to coordinate the implementation of programs should be linked directly to a program's outcome and the persons responsible for such programs. Program coordination activities linked directly to specific and measurable performance standards establishes better accountability for the coordination activities undertaken.

Additionally, coordination of program implementation should include participation by managers and staff that are directly responsible for a program's implementation. Their administrative insights and technical competence can often prove invaluable to the structuring of program coordination efforts.

**Use written agreements.** Written interagency agreements can be especially useful for achieving effective coordination of program implementation. Such is especially true for programs that are extremely complex, programs that involve a number of different organizations, and programs that require explicit performance at specified periods.

Written agreement can also be essential when there is substantial risk that an organization will fail to satisfy its portion of a multi-party program agreement, especially if legal challenges may occur, or when an agency's actions can directly and adversely impact the ability of other organizations to fulfill their responsibilities related to an implementation agreement.

**Identify and monitor program trends in related organizations.** Access to information about programmatic trends in other organizations and other resource areas is critical to identifying situations in which additional coordination may be necessary. Such information access enhances an organization's ability to anticipate circumstances in need of greater coordination and to suggest appropriate coordination mechanisms to meet such circumstances.

**Maintain broadly-linked resource information data bases.** Critical to encouraging coordination of program implementation among organizations is the maintenance of program and resource information data bases and, as appropriate, the linking of those data bases to larger information repositories accessible to others pursuing similar resource management objectives.

**Review agency administrative structures.** Organizations dependent on the successful

implementation of programs by related organizations should continually monitor and, as appropriate, consider changes in their organizational linkages. However, reorganizing state forestry organizations to improve interorganizational coordination should be done only after careful examination of other mechanisms for achieving coordination of program implementation.

### ***FUTURE DIRECTIONS FOR RESEARCH***

The forestry community's understanding of policy and program coordination is extremely limited. This is especially ironic given the number of governments and governmental levels involved in the use and management of forest resources, the administrative complexity of government organizations that develop and implement forest policies and programs, and the multiple outputs of forest resources that are the focus of government resource agencies (e.g., recreation, timber, water, wildlife, range forage, aesthetic beauty).

The information within this publication presents but a glimpse of a very complex administrative world that would benefit from additional research. The data does also suggest several

avenues for future research.

***Identify specific costs and benefits of coordination.*** The intensity of coordination needed for state forestry programs is consistently perceived as less than the level of coordination actually occurring. While this suggests that greater coordination may be needed, there may be circumstances where coordination hinders an organization's ability to accomplish desired objectives. In such situations, the cost of coordinating various interests and activities may exceed the benefits to be derived from such efforts—the desirable level of services provided may be less than if coordination did not occur. Needed are careful evaluations designed to explore whether marginal changes in coordination intensity actually produce a net gain in total program benefits.

***Secure more in-depth understanding alternative means of accomplishing coordination.*** While a number of mechanisms are available for coordinating policies and programs, the assessment conducted here represents but a modest effort to research the subject area from a forestry perspective. Needed is a more intense effort to assess the effectiveness of different coordinating techniques and the consequences of their application under different organizational, administrative, and political circumstances.

## REFERENCES

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- California Department of Forestry and Fire Protection. 1988. *California Forest and Fire Laws*. Handbook 6121, 1(1). The Resources Agency. Sacramento, CA.
- California Department of Forestry and Fire Protection. 1988. *California's Forests and Rangelands: Growing Conflict Over Changing Uses*. The Resources Agency. Sacramento, CA.
- California State Board of Forestry. 1990. *A Policy Statement to Address Growing Conflict Over Hanging Uses on California's Forests and Rangelands: 1990-1995*. Sacramento, CA.
- Christenson, James S. 1990. Personal correspondence. Bureau of Legal Services, Wisconsin Department of Natural Resources. Madison, WI.
- Council of State Governments. 1975. *Integration and Coordination of State Environmental Programs*. RM-570. Lexington, KY.
- Council of State Governments. 1988. *Resource Guide to State Environmental Management*. C-112. Lexington, KY.
- Council of State Governments. 1989. *Innovations in State Environmental and Natural Resource Programs 1987-1988*. C-136. Lexington, KY.
- Cromwell, Dean. 1990. Personal correspondence. May 25. California State Board of Forestry. Sacramento, CA.
- Fagunes, Kay. 1990. Personal correspondence. June 28. California Department of Forestry and Fire Protection, The Resources Agency. Sacramento, CA.
- Florida Forestry Council. 1988. Minutes of the Florida Forestry Council Meeting, October 18, 1988. Tallahassee, FL.
- Florida Forestry Council. 1989. Minutes of the Florida Forestry Council Meeting, March 1, 1989. Tallahassee, FL.
- Florida Statutes*. 1989. Chapter 589.
- Georgia Forestry Commission. 1983. *Georgia Forestry Laws, Second Edition*. Macon, GA.
- Georgia Forestry Commission. 1986. *Forest Resources Plan: 1986-1990*. Macon, GA.
- Georgia Forestry Commission. 1989. *Georgia Forestry Commission's Annual Report, 1989*. Macon, GA.
- Gray, Gerald J. and Paul V. Ellefson. 1987. *Statewide Forest Resource Planning Programs: An Evaluation of Program Administration and Effectiveness*. Station Bulletin 582-1987, Minnesota Agricultural Experiment Station, University of Minnesota. St. Paul, MN.
- Henly, Russell K. and Paul V. Ellefson. 1986. *State Forest Practice Regulation in the U.S.: Administration, Cost, and Accomplishment*. Station Bulletin AD-SB-3011. Minnesota Agricultural Experiment Station. University of Minnesota. St. Paul, MN.
- Mikell, Harold K. 1990. Personal correspondence. April 19 and May 17. Division of Forestry, Florida Department of Agriculture and Consumer Services. Tallahassee, FL.
- Mott, Basil J. F. 1968. *Anatomy of a Coordinating Council: Implications for Planning*. University of Pittsburgh Press, Pittsburgh, PA.
- Paulus, Robert E. 1990. Personal correspondence. California Department of Forestry and Fire Protection, The Resources Agency. Sacramento, CA.
- Pearsall, Sam. 1984. Multi-Agency Planning for Natural Areas in Tennessee. *Public Administration Review*. 1 (January-February): 43-38.
- Rabe, Barry G. 1986. *Fragmentation and Integration in State Environmental Management*. The Conservation Foundation. Washington, DC.
- Rogers, David L., David A. Whetten and Associates. 1982. *Interorganizational Coordination: Theory, Research, and Implementation*. Iowa State University Press, Ames, IA.
- State of California. 1983. Register 83, Title 14, Number 25. Sacramento, CA.
- Warren, Ronald L., Stephen M. Rose and Ann F. Bergunder. 1974. *The Structure of Urban Reform*. Lexington Books. Lexington, KY.
- Westmoreland, David L. 1990. Personal correspondence. April 11 and May 11. Georgia Forestry Commission. Macon, GA.
- Wisconsin Department of Natural Resources. 1989. *Manual Code 1103.1*. Madison, WI.
- Wisconsin Statutes*. 1988. Chapter 15.



## BIBLIOGRAPHY

- Bozeman, Barry and Michael Crow. 1986. Organization Theory and State Government Structure: Are There Lessons Worth Learning? *State Government*. 58(4): 144-150.
- Bryson, John M. 1984. The Policy Process and Organizational Form. *Policy Studies Journal*. 12(3): 445-463.
- Bryson, John M. and Peter Smith Ring. 1988. A Transaction Cost Approach to Policy Intervention. Unpublished Paper. University of Minnesota. Minneapolis, MN.
- Cahn, Robert and Patricia Cahn. 1989. Reorganizing Conservation Efforts in New Zealand. *Environment*, 31(3): 18-45.
- Ellefson, Paul V. 1991. *Forest Resources Policy: Process, Participants and Programs*. McGraw Hill Publishers, New York, NY.
- Environmental Protection Agency. 1982. *Streamlining the Environmental Permitting Process: A Survey of State Reforms*. Office of Policy and Resource Management. Washington, DC.
- Gage, Robert W. 1984. Federal Regional Councils: Networking Organizations for Policy Management in the Intergovernmental System. *Public Administration Review*. 2 (March-April): 134-144.
- Garnett, James L. 1983. *Reorganizing State Government: The Executive Branch*. Westview Press, Boulder CO.
- Haskel, Elizabeth H. and Victoria S. Price. 1973. *State Environmental Management: Case Studies of Nine States*. Praeger Publishers. New York, NY.
- Henry, Gary T. and Stephen W. Harms. 1987. Board Involvement in Policy Making and Administration. *Public Administration Review*. 47(2): 153-159.
- Liner, Blaine E., Elaine Morley, Harry P. Hatry, Pat Dusenbury and Saul Hoch. 1989. *State Management of Groundwater: Assessment of Practices and Programs*. The Urban Institute. Washington, DC.
- New York Land Resources Planning Group. 1976. *Integrated Project Control: Coordination and Consistency in State Water and Air Quality, Coastal Zone, and Land Use Planning*. Office of Program Development, Planning and Research, New York Department of Environmental Conservation. Albany, NY.
- O'Toole, Laurence J. Jr. and Robert S. Montjoy. 1984. Interorganizational Policy Implementation: A Theoretical Perspective. *Public Administration Review*. 6 (November-December): 491-503.
- Thomas, Christine L. 1990. The Policy/Administration Continuum: Wisconsin Natural Resources Board Decisions. *Public Administration Review*. 50(4): 446-449.
- Van de Ven, Andrew H. and Gordon Walker. 1984. *Dynamics of Interorganizational Coordination*. Discussion Paper #14, Strategic Management Research Center, University of Minnesota. Minneapolis, MN.
- Williamson, Oliver E. 1979. The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology*. 87(3): 548-577.

## APPENDIX

*Text of cover letter and survey instrument used to compile information evaluated in this study. Responses were received from the "leading State forestry officials" of all 50 states.*

STATE OF MINNESOTA  
State Planning Agency  
300 Centennial Building  
658 Cedar Street  
St. Paul, Minnesota 55155  
(612) 296-3985

December 8, 1989

Dear

The Minnesota State Planning Agency and the University of Minnesota's Department of Forest Resources are undertaking a study concerning the coordination of forest policies and programs of state governments. For purposes of this study, we define coordination as "the process by which two or more organizations arrange, match or harmonize policies and programs to achieve shared goals."

Of special interest to us is how the forestry responsibilities and activities of various state departments, agencies and divisions are coordinated so as to achieve common interests in a state's overall forestry goals. Very little is known about coordination processes and their effectiveness.

As the state's leading forestry official, we are interested in your perception of how forest policies and programs are coordinated in your state, and the confidence you have in the mechanisms used to achieve such coordination. We would like you to complete the enclosed questionnaire and return it to us by January 12, 1990. The questionnaire should be returned in the enclosed stamped and self-addressed envelop.

If you should have questions about our study or the questionnaire we are asking you to complete, do not hesitate to call us. A summary of the study's results will be sent to you if you check the appropriate box at the end of the questionnaire.

Thank you in advance for your cooperation.

Sincerely,

Michael A. Kilgore  
(612-297-2607)

Paul V. Ellefson  
(612-624-3735)

**COORDINATING STATE FOREST RESOURCE POLICIES AND PROGRAMS**

**A SURVEY TO DETERMINE THE VARIOUS APPROACHES STATES USE TO COORDINATE FORESTRY POLICIES AND PROGRAMS.**

**SPONSORED BY: UNIVERSITY OF MINNESOTA DEPARTMENT OF FOREST RESOURCES, AND THE MINNESOTA STATE PLANNING AGENCY**

**A. Current Structure/Organization of Forestry Activities**

**Q-1** Which of the following program areas does your forestry organization have primary responsibility for? (Please circle all that apply.)

- 1 Wildfire Suppression
- 2 Prescribed Burning
- 3 State Timber Sale Operations
- 4 Forest Road Design and Construction
- 5 Forest Land Acquisition, Exchange, Sales and Leases
- 6 Reforestation of State Lands
- 7 Forest Insect and Disease Management
- 8 Forest Wildlife Management
- 9 Forest Recreation Development and Management
- 10 Watershed Management
- 11 Forestry Research
- 12 Environmental Education
- 13 Professional Continuing Education
- 14 Forest Planning
- 15 Forest Resource Inventory and Assessment
- 16 Statewide Natural Resource Information Systems
- 17 Environmental Review (e.g., EIS)
- 18 Private Forest Landowner Assistance
- 19 Regulation of Private Forest Land Activities
- 20 Forest Property Tax Law Administration
- 21 Urban Forestry
- 22 Tree Nursery Operations
- 23 Other \_\_\_\_\_

**Q-2** (a) Does your forestry organization also have other responsibilities not typically associated with forest management and planning? (e.g., economic development)

- 1 Yes
- 2 No

(b) If YES, please list these program responsibilities.

**Q-3** Which of the following public organizations are principally involved in forest resources management and/or planning in your state? (Please circle all that apply.)

- 1 Forest Service USDA
- 2 Bureau of Land Management, USDI
- 3 County or Municipal Forest Agencies
- 4 State Department of Agriculture
- 5 Soil Conservation Service, USDA
- 6 Local Soil and Water conservation Districts
- 7 State Planning Agency
- 8 State Fish and Wildlife Department
- 9 State Economic Development Office
- 10 Other \_\_\_\_\_
- 11 No other agencies have forestry responsibilities

**B. General Character of Coordination**

**Q-4** Listed below are a number of specific program or activities areas which are common to most state forestry programs. For each area that you have primary responsibility for, how much need, if any, do you feel there is for coordination (i.e., arranging, matching or harmonizing programs) with other organizations responsible for similar areas? (Please circle the appropriate number.)

Activity	Need for Coordination			
	Strong	Moderate	Little	None
1 Wildfire Suppression	4	3	2	1
2 Prescribed Burning	4	3	2	1
3 Timber Sale Operations	4	3	2	1
4 Forest Road Development	4	3	2	1
5 Forest Land Acquisition	4	3	2	1
6 Reforestation Activities	4	3	2	1
7 Insect And Disease Control	4	3	2	1
8 Forest Wildlife Management	4	3	2	1
9 Forest Recreation Development & Management	4	3	2	1
10 Forest Watershed Management	4	3	2	1
11 Forestry Research	4	3	2	1
12 Environmental Education	4	3	2	1
13 Professional Continuing Ed.	4	3	2	1
14 Forest Planning	4	3	2	1
15 Forest Resource Assessment	4	3	2	1
16 Resource information Systems	4	3	2	1
17 Environmental Review	4	3	2	1
18 NIPF Assistance	4	3	2	1
19 Forest Property Tax Admin.	4	3	2	1
20 Private Forest Regulation	4	3	2	1
21 Urban Forestry	4	3	2	1
22 Tree Nursery Operations	4	3	2	1
23 Other _____	4	3	2	1

**Coordination of Forest Resource Policies and Programs**

**Q-5** For the following program and activity areas, indicate the degree of coordination that actually occurs with other organizations responsible for similar programs and activities? (Please circle the appropriate number.)

Activity	Actual Coordination			
	Strong	Moderate	Little	None
1 Wildfire Suppression	4	3	2	1
2 Prescribed Burning	4	3	2	1
3 Timber Sale Operations	4	3	2	1
4 Forest Road Development	4	3	2	1
5 Forest Land Acquisition	4	3	2	1
6 Reforestation Activities	4	3	2	1
7 Insect and Disease Control	4	3	2	1
8 Forest Wildlife Management	4	3	2	1
9 Forest Recreation Dev. & Mgmt.	4	3	2	1
10 Forest Watershed Management	4	3	2	1
11 Forestry Research	4	3	2	1
12 Environmental Education	4	3	2	1
13 Professional/continuing Ed.	4	3	2	1
14 Forest Planning	4	3	2	1
15 Forest Resource Assessment	4	3	2	1
16 Resource Information Systems	4	3	2	1
17 Environmental Review	4	3	2	1
18 NIPF Assistance	4	3	2	1
19 Forest Property Tax Admix.	4	3	2	1
20 Private Forest Regulation	4	3	2	1
21 Urban Forestry	4	3	2	1
22 Tree Nursery Operations	4	3	2	1
23 Other _____	4	3	2	1

**Q-6** In general, how well do you feel forestry programs and activities in your organization are coordinated with those of the principal organizations in your state with Forestry responsibilities?

- 1 Closely Coordinated
- 2 Moderately Coordinated
- 3 Little Coordination
- 4 No Coordination

**Q-7** Which of the following best describes the manner in which overall coordination of forest management and planning is achieved in your state? (Please circle all that apply.)

- 1 Some coordination occurs through informal task forces and information sharing.
- 2 Coordination occurs through formal forestry coordinating mechanisms (e.g., Councils, Commissions, Boards).
- 3 Coordination occurs primarily through organizational consolidation.
- 4 Coordination occurs Primarily through the State Planning Agency and/or Finance Department.
- 5 Coordination occurs primarily through direction from the Governor's Office.
- 6 Very little coordination occurs.

Please rank the two most important responses you circled.

1st      2nd

\_\_\_\_\_

**Q-8** To the extent that coordination occurs, how much influence have the following factors had on successful coordination of forestry programs and activities in your state? (Please circle the appropriate number.)

	Degree of Influence			
	High	Medium	Low	None
1 Organization of State Government	4	3	2	1
2 Actual Legislation	4	3	2	1
3 Implementation Techniques for Forestry Programs	4	3	2	1
4 Emphasis on Integrated Planning and Management	4	3	2	1
5 Informal Intergovernmental Cooperation	4	3	2	1
6 Governor's Leadership	4	3	2	1
7 Legislative Leadership	4	3	2	1
8 Public Pressure for Greater Coordination	4	3	2	1
9 Natural Resource Information System Design	4	3	2	1
10 Other _____	4	3	2	1

**Q-9** On the basis of your organization's experience, how significant are the following as obstacles to achieving coordination of forest policies and programs in your state? (Please circle the appropriate number.)

Very Significant      Somewhat Significant      Little Significance      No Significance  
4                              3                              2                              1

- 1 Forestry responsibilities are fragmented among many agencies.      4 3 2 1
- 2 Absence of any statewide policy statements.      4 3 2 1
- 3 Administrative resistance to change.      4 3 2 1
- 4 Lack of executive leadership.      4 3 2 1
- 5 Failure to translate statewide policies and objectives into specific plans.      4 3 2 1
- 6 Poor implementation of forestry Programs and plans.      4 3 2 1
- 7 Lack of effective intergovernmental communication (federal, regional, state).      4 3 2 1
- 8 Lack of effective communication within different parts of the Organization (forestry, wildlife, recreation, water, etc.).      4 3 2 1
- 9 Lack of information on forest resource trends, and trends in other activities affecting forestry.      4 3 2 1
- 10 Other \_\_\_\_\_      4 3 2 1

**C. Coordination By Formal Interagency Mechanisms**

**Q-10** Does your state have a board, council, commission, committee or other similar formal mechanism that develops and/or coordinates forest policies and/or programs?

- 1 Yes, Official Name: \_\_\_\_\_
- 2 No

If NO, please go to question #21.

**Q-11 Please indicate the number of individuals represented on this forest policy and program coordinating body for each category listed below.**

	Number Represented			Totals
	City/Mun	State	Federal	
1 Forestry	—	—	—	—
2 Fish and Wildlife	—	—	—	—
3 Land Management	—	—	—	—
4 Pollution Control	—	—	—	—
5 Agriculture	—	—	—	—
6 Forest Industry	—	—	—	—
7 Soil and Water Districts	—	—	—	—
8 Governor's Office	—	—	—	—
9 State Planning Agency	—	—	—	—
10 Legislature	—	—	—	—
11 Academic research	—	—	—	—
12 Sporting Groups	—	—	—	—
13 Landowner Associations	—	—	—	—
14 Environmental Groups	—	—	—	—
15 Trade Associations	—	—	—	—
16 Labor	—	—	—	—
17 Citizen Members	—	—	—	—
18 Other _____	—	—	—	—

**Q-12 (a) Are the members of this forest policy and program coordinating body elected or appointed?**

- 1 Elected
- 2 Appointed

**(b) Do they have designated terms?**

- 1 Yes
- 2 No

**(c) If yes, how long are their terms?**

**(d) If they are appointed, who makes the appointments?**

**Q-13 How was this forest policy and program coordination mechanism created?**

- 1 State Legislation
- 2 Executive Order
- 3 Administrative Rules
- 4 Informal Agreements Among Forestry Leaders
- 5 Other \_\_\_\_\_

**Q-14 What was the event that resulted in the creation of this coordinating mechanism for forest policies and programs in your state?**

- 1 Legislative Study
- 2 Key Environmental/Natural Resource Issue (identify issue) \_\_\_\_\_
- 3 Independent Commission Study Recommendations
- 4 No significant event precipitated establishment of this Coordinating mechanism.
- 5 Other \_\_\_\_\_

**Q-15 Who is this coordinating body directly accountable to?**

- 1 Governor
- 2 Legislature
- 3 Agency Head or Director (specify \_\_\_\_\_)
- 4 Other \_\_\_\_\_

**Q-16 Which of the following are primary functions of this coordinating mechanism? (Please circle all that apply.)**

- 1 Policy Development
- 2 Program Coordination
- 3 Fiscal Development and Management
- 4 Regulatory
- 5 Program Oversight and Evaluation
- 6 Long Range and/or Strategic Planning
- 7 Other \_\_\_\_\_

**Q-17 Please indicate the degree of influence you believe the actions and activities of this coordinating mechanism have on the following forest ownerships. (Please circle the appropriate number.)**

	High	Medium	Low	None
1 National Forests	4	3	2	1
2 Other Federal Forest Ownerships	4	3	2	1
3 State Forests	4	3	2	1
4 County/Municipal Forests	4	3	2	1
5 Private Industrial Forests	4	3	2	1
6 Private Nonindustrial Forests	4	3	2	1

**Q-18 In general, how would you rank the overall effectiveness of this mechanism in Coordinating forest policy development and program implementation in your state?**

- 1 Very Effective
- 2 Somewhat Effective
- 3 Somewhat Ineffective
- 4 Very Ineffective

**Q-19 Based on your observations, how do think each of the following individuals or organizations perceives the usefulness of this forest policy and program coordinating mechanism in accomplishing its stated objectives? (Please circle the appropriate number.)**

	Very Useful	Somewhat Useful	Limited Usefulness	Not Useful	Don't Know
	5	4	3	2	1
1 State Legislators	5	4	3	2	1
2 Governor's Office	5	4	3	2	1
3 State Forestry Officials	5	4	3	2	1
4 Federal Forestry Officials	5	4	3	2	1
5 County Forestry Officials	5	4	3	2	1
6 Forest Industry	5	4	3	2	1
7 Forest Landowner Associations	5	4	3	2	1
8 Conservation Organizations	5	4	3	2	1
9 Environmental Organizations	5	4	3	2	1
10 Other State Agencies	5	4	3	2	1
11 Coordinating Mechanism Members	5	4	3	2	1
12 Coordinating Mechanism Staff	5	4	3	2	1

**Q-20 (a) If you were given the authority to modify this coordinating body, would you change its membership composition?**

- 1 Yes
- 2 No

**(b) If YES, what changes would you propose?**

**(c) If you were given authority to modify this coordinating body, would you change its major functions and duties?**

- 1 Yes
- 2 No

**(d) If YES, what changes would you propose?**

**Q-23 (a) Does your agency maintain or participate in maintaining a forest resource data information system?**

- 1 Yes
- 2 No

**(b) If YES, which of the following information is included in the forestry information system? (Please circle as many as are applicable.)**

- 1 Statewide Forest Inventory
- 2 Forest Utilization Inventory
- 3 Statewide Forest Road Inventory
- 4 Forest Products Production Data
- 5 Forest Wildlife and/or Habitat Data
- 6 Forest Soils and Erosion Data
- 7 Forest Recreation Resources Data
- 8 Other \_\_\_\_\_

**D.Coordination by Other Mechanisms**

**Q-21 Which of these formal policy statements does your state have to guide forestry program officials in your organization? (Please circle all that apply.)**

- 1 Adopted Statewide Forest Management Plan
- 2 Adopted Statewide Environmental Policy Act
- 3 Formal Policy Statement by Governor
- 4 Comprehensive Statewide Forest Management Plan
- 5 Formal Policy Statement by Director or Commissioner of the Natural Resources Organization
- 6 Other \_\_\_\_\_
- 7 None of the Above

**Q-22 To what extent are the following statewide plans (if any) coordinated with forestry programs in your state? (Please circle the appropriate number.)**

	Degree of Coordination			
	High	Moderate	Low	No Plan Exists
1 Statewide Environmental Plan	4	3	2	1
2 Surface Water Quality Plan	4	3	2	1
3 Ground Water Quality Plan	4	3	2	1
4 Fish and Wildlife Plan	4	3	2	1
5 Outdoor Recreation Plan	4	3	2	1
6 Air Quality Plan	4	3	2	1
7 Land Use Plan	4	3	2	1
8 Population and Growth Plan	4	3	2	1
9 Economic Development Plan	4	3	2	1
10 Other	4	3	2	1

**Q-24 (a) Is this forest resource information system part of a larger statewide natural resource or environmental data base system?**

- 1 Yes
- 2 No

**(b) If YES, how important is this link in encouraging more integrated forest management and planning?**

- 1 Very Important
- 2 Somewhat Important
- 3 Somewhat Unimportant
- 4 Very Unimportant

**Q-25 (a) Does your forestry organization have formal (written) interagency agreements (e.g., memorandums of agreement) with other organizations?**

- 1 Yes
- 2 No

**(b) If YES, please indicate the tree program areas in which you have the greatest number of interagency agreements. (Please circle the top three)**

- 1 Fish And Wildlife (Federal)
- 2 Fish And Wildlife (State)
- 3 Minerals
- 4 Surface Water Quality
- 5 Ground Water Quality
- 6 Air Quality
- 7 Parks and Trails
- 8 Solid Waste Management
- 9 U.S. Forest Service
- 10 Other Federal Agencies
- 11 Local Forestry Agencies
- 12 Other \_\_\_\_\_

**(c) If YES, how would you rank the effectiveness of formal (written) interagency agreements in actually achieving better coordination of state forestry programs and policies?**

- 1 Very Effective
- 2 Somewhat Effective
- 3 Somewhat Ineffective
- 4 Very Ineffective

Q-26 (a) Has there been a major reorganization of natural resource or environmental agencies in your state within the past 10 years?

- 1 Yes
- 2 No

(b) If YES, how would you rank the effectiveness of the reorganization in achieving better coordination of forestry policies and programs with other state agencies?

- 1 Very Effective
- 2 Somewhat Effective
- 3 Somewhat Ineffective
- 4 Very Ineffective

Q-27 Which of the following best describes the use of informal communication techniques (e.g., correspondence, newsletter, joint staff meetings, etc.) to achieve coordinated forest policies and programs in your state?

- 1 Informal communication is the primary means of achieving coordinated forest policies and programs.
- 2 Informal communication is a significant component to achieving coordinated forest policies and programs.
- 3 Informal communication has little influence on achieving coordinated forest policies and programs.
- 4 Informal communication has no influence on achieving coordinated forest policies and programs.

Q-28 In terms of employees and budget, how large is the forestry organization for which you are responsible:

Numbers of employees \_\_\_\_\_

Most recent annual operating budget \_\_\_\_\_

Q-29 Are there any additional observations you would care to make about coordination of forestry programs and activities in your state?



Name of Survey Respondent \_\_\_\_\_

State \_\_\_\_\_

Agency/Department \_\_\_\_\_

Official Title \_\_\_\_\_

Telephone Number \_\_\_\_\_

Please check this box if you would like a copy of the study results.

Please return the survey in the stamped, self-addressed envelope by January 12, 1990

If you have any questions, please contact:

Michael A. Kilgore  
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Thank You For Your Cooperation!

